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MILITARY SCIENCE, THEORY, STRATEGY

DEVELOPMENT OF DEFENSIVE TACTICS

Moscow SOVIET MILITARY REVIEW in English No 1, Jan 80 pp 34-35

[Article, under the heading "Combat Training", by Col G. Ionin, cand sc (Military): "Development of Defensive Tactics (On the experience of the Great Patriotic War)"]

[Text]

Development of the tactics of a defensive battle during the Great Patriotic War (1941-45) took place under the influence of changes in the means of armed struggle, increase of combat capabilities of forces and other factors, and also as a result of the changes in the enemy tactics of offensive operations. In the very beginning of the war defence was linear and organised on a wide front and consisted of centres of resistance. Battle orders of formations when engaging in the first defensive battles were mainly one echelon. Manpower and fire weapons were evenly distributed along the front.

The battalion defence areas were the basic sections of defence zone. In order to stop and exhaust the enemy striking groups, to bar the way to his numerous tanks, the defences were organised as antitank defences.

Antitank strong points were organised from the first months of the war on tank-threatened directions. Artillery was also positioned on these directions. Its mission was to carry out indirect fire and it was included in the general system of the antitank defence. Attack aircraft using rocket projectiles were used for fighting tanks. All these were the beginning of improvement of tactical defence.

Considerable changes in organising defences took place during the Battle of Moscow (1941) and the Battle of Stalingrad (1942). As forces increased in strength, the defence zones of divisions became narrower. Second echelons, and also artillery-antitank and tank reserves and strong artillery groups were created.

The second echelons of regiments and divisions organised battalion defence areas, and this substantially increased the stability of the defence and was the beginning of the organisation of several defensive positions in the main zone.

Saturation of infantry divisions with antitank artillery made it possible to allot a greater quantity of it to battalion areas, to organise in them not only antitank strong points but also tankproof localities.

Organisation of defence zones with engineer works was improved. Trench systems and mine fields were more frequently used.

Thus, during the first period of the Great Patriotic War the development of defensive tactics was along the lines of a certain reduction of frontage and increase of depth of the divisional defence zone, increase of tactical densities, strengthening of the antitank defence, and also improvement of engineer organisation of zones and positions.

After the rout of the Nazi forces at Stalingrad the Soviet forces conducted a strategic offensive. Besides this they successfully executed a number of big defensive operations. In connection with the qualitative and quantitative changes in weapons and in the organisation of forces and with the combat experience acquired the forces perfected the tactics of defensive actions. The defence at Kursk in 1943 is particularly significant in this respect.

The restoration of the corps link of control resulted in a considerable increase of the tactical depth of the defence, which now included two zones. The battle order of infantry corps holding defences on the main lines of advance assumed two-echelon formation. In some corps besides echelons, an artillery tank reserve, tank reserve, and mobile obstacle detachments were organised. The corps defence zone on the main line of advance reached 20-30 km in frontage and 15-20 km in depth.

Considerable changes took place in infantry divisions' battle order. The battle order of each division usually consisted of two echelons, an artillery group, an artillery-

tank reserves, a mobile obstacle detachment and antitank strong points (areas). Simultaneously with this artillery groups for support of the infantry were formed in divisions. In some cases a division had a tank reserve.

The allotment of considerable forces of manpower and equipment to the second echelon, the organisation of antitank strong points and antitank areas and also the creation of various reserves considerably increased the stability of infantry divisions' defences.

The defences of the combined-arms formations at Kursk were markedly positional. The width of divisional zones in the direction of the enemy main blow decreased and was equal to 9-14 km, the depth increased to 7 km.

The increase of formations' fire power and the allotment of a great quantity of the artillery weapons for their support from formations and units of the Supreme Command GHQ reserve made it possible to substantially increase tactical densities and thus solve the problem of organising defences saturated with fire weapons. Thus, in Infantry divisions holding defence in the main directions, the fire density of artillery and mortars increased to 20-30 and more pieces per km of frontage, i.e. twofold in comparison with the defence at Stalingrad; the density of antitank weapons increased on average 1.5-2-fold. The density of infantry and tanks per km of frontage also increased.

In the defence at Kursk the formation of defensive zones was substantially developed. In the main zone primary, alternate and intermediate positions were organised. Switch positions were also prepared, their main task being to prevent the enemy from approaching the flanks. Battalion defence areas provided with a trench system and communication trenches, foxholes, machine-gun pits, antitank gun fire emplacements, dugouts and engineer obstacles formed the basis of each position. The second defence zone was organised at a distance of 10-15 km from the forward edge of the main zone. Its depth usually did not exceed 5 km.

As before, particular attention was paid to antitank defence. It was considerably improved. Directions of expected enemy blows were supported with massed antitank weapons. The density of antitank guns i.e. the tactical defence zone was already 10-12 pieces per kilometre of frontage. During defensive fighting it usually increased on the main directions as a result of manoeuvre with reserves and artillery from sectors not attacked by the enemy.

The antitank defence system included antitank strong points and antitank areas, artillery, tanks and self-propelled guns located on the tank-threatened directions, antitank obstacles, artillery-antitank and tank reserves and also mobile obstacle detachments.

Antitank obstacles, particularly mine fields, played a great role in fighting enemy tanks. The density of mining in the defence at Kursk on the main lines of advance was 1,700 antipersonnel and 1,500 antitank mines per kilometre of frontage, i.e. twice as much as at Stalingrad.

The antiaircraft defence and fire systems of units and formations were also improved.

Provision of the forces with different types of weapons and combat equipment as well as creation of new elements of combat formation made higher cooperation demands. Joint location of command and observation posts of the commanders of all-arms and artillery units and formations, and also maximum closeness of command posts of the air unit commanders and their representatives to the control posts of all-arms formations had a positive effect on stability and continuity of cooperation.

The role of manoeuvre with forces and weapons in a defensive battle also increased. It acquired exceptionally wide scope and was carried out both from the depth towards the front and along the front. The main purpose of manoeuvre was not to allow the breakthrough of the defence and its development towards the flanks and in the depth, to deprive the enemy of freedom of manoeuvre and to create prerequisites for successful counterattacks and counterblows.

The defensive actions of the Soviet forces at Kursk were characterised by mass use of armoured and mechanised forces, both jointly with Infantry formations and independently.

As a whole, the development of defence at Kursk proceeded along the lines of increasing its stability and activity.

In 1944 the Soviet forces carried out chiefly offensive actions. More often they assumed the defensive to repulse counterblows of large enemy tank forces during the offensive. Such conditions arose on the outer front of encirclement at Korsun-Shevchenkovsky, at Ternopol and Brody, in the area of Jassy and Kishinev, near the city of Sheulyai and west of Budapest. Here the main attention was paid to organising antitank defence in a short time: creating antitank strong points and antitank areas, making broad use of mine fields, manoeuvring rapidly with reserve antitank weapons on threatened directions. A broad and daring manoeuvre led to the enemy quickly losing his superiority in the directions of the main blows and being forced to abandon any further offensive.

The defensive operation of the 3rd Ukrainian Front near Lake Balaton in March 1945 was the most characteristic example of the development of defence in the final stage of the war.

In contrast to the Battle of Kursk the deeply echeloned defences in the area of Lake Balaton were organised in a very short time, in close contact with the enemy and sometimes under the pressure of his superior forces.

Average tactical densities in organising defences were smaller than in the defence at Kursk and frequently insufficient. But this was compensated by manoeuvre of tanks, self-propelled guns and artillery from other sectors.

In the concluding stage of the Great Patriotic War the defence was characterised by the creation of second echelons, resolute concentration of the main efforts in the direction of the main attack, wide use of mine fields. The activity of the defenders increased, they made wide use of manoeuvre with manpower and equipment in a threatened

sector from the depth and from the secondary sectors of the front, skilfully combining holding of positions and zones with resolute counterattacks. Such defences of the Soviet forces were invariably successful in the struggle against superior enemy forces.

The experience of organising and fighting defensive battles, particularly at Kursk and near Lake Balaton, was taken as the basis of postwar views on defence.

The Great Patriotic War was the most important stage in the development of combined arms tactics in general and of defence in particular.

The modern theory of waging a defensive battle is the result of historical development, and the extremely rich experience accumulated by the Soviet Army on the battlefields of the Great Patriotic War played an inestimable role in its formation. A number of fundamental principles, though slightly changed, have not lost their importance up to the present day. The echeloning of the defence, artillery groups, antitank reserves and other elements of the battle order of units and formations persist, though their composition, combat capabilities and methods of employment have been considerably developed.

All this shows the importance of deep and all-round study, analysis and creative use of combat experience conformably to the new material base of defensive battle. Such an approach to the study of experience makes it possible to reveal the development tendencies of defensive actions, and also gives abundant material for practical conclusions.

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MILITARY SCIENCE, THEORY, STRATEGY

PRINCIPLES OF MODERN BATTLE

MOSCOW SOVIET MILITARY REVIEW in English No 2, Feb 80 pp 16-17

[Article, under the heading "Combat Training", by Lt Gen N. Neyelov (Neyolov): "Principles of Modern Battle"]

[Text]

A battle is an organised armed encounter of formations, units and subunits of the belligerent sides with a purpose of destroying, defeating or capturing the enemy and also of seizing and holding important areas. It may be carried out on land, in the air and at sea and is the only means of achieving victory.

Victory is achieved by powerful blows by all types of weapons, timely exploitation of their results, and vigorous and resolute actions of formations, units and subunits.

The forms and methods of battle have changed under the influence of the development of weaponry, combat equipment and the qualitative composition of forces. The advent of nuclear weapons, provision of forces with great numbers of tanks, infantry fighting vehicles, guns, antiaircraft weapons, aircraft, helicopters and other combat equipment and armament have led to profound changes in the character and methods of combat actions of subunits, units and formations, and imparted to modern battle a number of features radically distinguishing it from fighting in the past. It is characterised by high manoeuvrability, intensity and fluidity, by rapid and sharp changes in the situation. Combat actions spread over a wide frontage, to a great depth and are carried out at high speed.

One of the characteristic features of contemporary battle is the resoluteness in achieving the aim. It is manifested in all types of combat actions and is determined by two main causes: by the political purposes of the war and the use in it of exceptionally powerful means of destruction.

This predetermines the non-compromising issue of war, i.e. the pursuit of hostilities to complete victory over the enemy.

New means of armed struggle provide the prerequisites for the resolute waging of battle.

Resoluteness finds its expression in one of the main principles of tactics — combat activity. Its essence consists in the fact that victory in battle, as a rule, is achieved by the side which, other conditions being equal, is more active, energetic, shows initiative, imposes its will on the enemy and forces him to act in conditions disadvantageous for him.

Activity in battle presupposes the ability of commanders to take daring decisions and show persistence in carrying them out, energetic and selfless actions of the forces, their striving to win victory in the shortest possible time and with minimum losses. Activity demands flexible employment of different kinds of actions. But the most effective kind is the offensive. It is this type of action which ensures the defeat of the enemy.

Use of powerful weapons, high mobility of forces, absence of a continuous front line, presence of large gaps and open flanks make modern battle highly manoeuvrable. Nuclear weapons make it possible to deliver powerful blows at short notice, to put out of action a great quantity of enemy manpower and equipment, to make considerable breaches in his battle formations and to create the necessary conditions for a rapid advance of one's own forces. The growing combat possibilities of the troops and their high mobility allow the results of nuclear and fire blows to

be quickly exploited, the enemy to be attacked from the move and the effort intensified in short time in those directions on which the greatest success has been achieved.

Considerable dispersion of units and formations creates favourable conditions for carrying out enveloping movements, deep turning movements, daring approach to the enemy flanks and rear and for striking unexpected and resolute blows at him from various directions.

Manoeuvre is an integral part of contemporary battle. It can be carried out with manpower and equipment, nuclear blows and fire of conventional weapons.

A fire manoeuvre can be carried out in an exceptionally short period of time and to a great depth. It can inflict on the enemy such losses of manpower and equipment that it is not necessary to create large groupings of forces for delivering a blow.

The importance of manoeuvre with forces has also grown. Its scale, conditions and purposes have substantially broadened. Manoeuvre with forces is carried out for the purpose of holding an advantageous position to deliver a blow at the enemy's most vulnerable spot.

At an exercise the actions of the company under Senior Lieutenant I. Ivanov were highly appraised. As an advance party it had to reach another route, to forestall the "enemy" in capturing an advantageous line and to hold it until the arrival of the main forces. Estimating the situation the commander came to the conclusion that the "enemy" disposed of better roads and could approach the advantageous line sooner than his company.

The route along which the advance party was marching abounded in natural obstacles. According to the exercise director's narrative, all bridges had been "destroyed" and slashings had been organised. In short, the company commander understood that it was impossible to forestall the "enemy" in capturing the line. A dominating hill had to be captured in battle. But how? From the front it was firmly held by the "enemy" and on the flanks were marshes. Only a skilful turning movement could bring success. That was the decision which was taken by the company commander. He chose the most hardy and experienced men. During the night the group, advancing through marshes and overgrowth, managed to bypass the hill unnoticed. By a simultaneous attack from the front and rear the company captured the hill.

A well thought out and successfully carried out manoeuvre has always been considered a sign of a commander's high combat skill.

The employment of methods of fighting unknown to the enemy, and of new weapons, powerful fire blows and high mobility of forces, combat actions carried out through the entire depth of battle orders of units and formations, including second echelons and reserves, make a modern all-arms battle fluid and tense.

Owing to the capacity of the nuclear weapon to change almost instantly the correlation of manpower and equipment in a given direction and the increased combat capabilities of forces, the situation on the battlefield may change in an extremely short time. And in some cases the change may be very sharp. All this makes battle highly dynamic and fluid. Consequently, the necessity for combat readiness is enhanced because on its level depend the speed and organisation with which units and subunits are committed to battle and their success in fulfilling their combat missions. In this connection the time factor and operational efficiency of the work of commanders and staffs are of particular importance. Inasmuch as the time for organising battle is reduced the commanders seek methods of organising it which demand less time. For this purpose the methods of formulating decisions and bringing them to the knowledge of subunits and units are being improved and the new technical means of control introduced.

Here much depends on the initiative, resource and creative ability of commanders. A creative approach to the solution of problems at exercises, for example, helped one of the battalion commanders to win time and thus achieve success in a practice battle. In a meeting engagement he deployed subunits into battle order straight from the battle columns, bypassing the classical successive reorganisation first into company and then into platoon columns. The battalion forestalled the "enemy" in deployment and was the first to deliver a blow. It goes without saying that such a method is far from being always practicable. But in the given situation it proved its value.

The considerable increase in the combat capabilities of forces, their manoeuvrability, air mobility and ability to overcome without stopping vast distances and water barriers result in combat actions spreading out over a wide frontage to a great depth and being carried out at high speed. The great depth of all-arms battle is conditioned by the increased range of modern weapons, the

wide use of airborne troops, and also the ability of forces to penetrate quickly into the depth of the enemy positions.

If, for example, during the Great Patriotic War a battalion carried out an offensive on a frontage up to 0.5 km, today it is up to 2 km. The speed of the offensive has grown too and manoeuvrability increased.

As a rule, combat actions develop unevenly: in certain directions units can advance rapidly, in others success may turn out to be insignificant, in others again the troops may be forced to hold defences or even withdraw. Mutual deep penetration of the belligerents is a usual occurrence. Frequently subunits and units are forced to fight battle, having on their exposed flanks and in the rear the outflanked enemy forces capable of carrying out effective actions.

Modern all-arms battle makes new, higher de-

mands on the combat skill, discipline, moral and psychological steeling and physical training of the personnel. Particularly high demands are made on commanders. They must be able to understand the situation which has taken shape, to take a correct decision and be firm in carrying it out, display poise and initiative. Even when their units sustain heavy losses in manpower and equipment, commanders must be firmly resolved to carry out the mission at any cost.

Recently, science and technology have been developing at high rates. Ever new models of weaponry are coming into military service in all armies the world over. The character and features of modern battle are changing accordingly. This demands a creative approach to the study of the theory of battle, competent application of the theoretical principles to practice, the search for new forms and methods of carrying out operations.

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MILITARY SCIENCE, THEORY, STRATEGY

REVIEW OF BOOK ON USSR NATIONAL DEFENSE

Moscow SOVIET MILITARY REVIEW in English No 2, Feb 80 pp 55-56

[Review by Col A. Pozmogov of book by S.V. Lipitsky (Lipitskiy): LENINSKOYE RUKOVODSTVO OBORONY STRANY 1917-1920 (Lenin's Guidance of the Country's Defense, 1917-1920)]

[Text]

The Political Literature Publishing House has put out a book under this title. Its author S. V. Lipitsky, D. Sc. (History), sets forth the experience of the Russian Communist Party (Bolsheviks) which, for the first time in history, created and headed a streamlined system of higher Party, state and military bodies to direct the defence of the first socialist country and lead the Soviet people to victory over the combined forces of the internal counter-revolutionaries and foreign interventionists in 1918-20. The organisational and guiding activity of the Party under V. I. Lenin was a decisive factor in ensuring the defence of the gains of the October Revolution.

The author writes that the practice of the world struggle for socialism enriches the experience accumulated by the working people of the Soviet Union. At the same time it convincingly shows that the basic general laws of socialist revolution, including the laws governing its armed defence which were first manifested in the fight for Soviet power in Russia, are of world-wide historic importance. Many peoples in the world are throwing off the chains of national and social oppression and embarking on the road of socialist development. Soviet experience in organising the defence of freedom, independence and socialism is of special importance in these peoples.

The book states that early in the 20th century V. I. Lenin arrived at conclusions of exceptional significance. He wrote that in the civil war against the exploiters and oppressors the working people would need military guidance. Only a revolutionary Marxist Party could and should lead the armed struggle of the masses. V. I. Lenin provided the working class with a scientific programme of struggle against export of counter-revolution, against imperialist aggression, with a doctrine on the defence of its Socialist Homeland.

During the civil war unleashed through the fault of the imperialists V. I. Lenin had only creatively determined a fundamentally new system of higher defence bodies of

the country (a system differing radically from all past systems), but also took a direct part in forming each of its elements and personally headed its pivotal bodies, namely the Party Central Committee, the Council of People's Commissars and the Defence Council.

As the ruling party the Communist Party had to ensure the country's defence and security. At the same time it had to destroy the old army as the armed bulwark of the power of the exploiting classes. Therefore, it was necessary to solve a double problem: to establish firm revolutionary control over all the elements of the old military leadership and to form without delay new bodies for the direction of the country's defence, to build up armed forces of a new type as an inalienable part of the working people's state. The breaking up of the old establishment was closely connected with revolutionary creativity.

In the first few weeks and months following the establishment of Soviet power, when the workers' and peasants' state machine was just being set up, the Council of People's Commissars headed by V. I. Lenin concentrated in its hands the direct guidance of the available armed forces. A Committee for Military and Naval Affairs was created within the framework of the Council of People's Commissars.

The book shows that the Party and Soviet Government organised resistance to the advancing armies of German imperialism in February 1918. They opposed to the might and experience of the enemy new methods of warfare in strategic offence, methods proper to a just revolutionary war. Some of the basic principles governing this type of warfare were set forth in the historic Decree "The Socialist Fatherland Is in Danger!" issued by the Council of People's Commissars on February 21, 1918.

In pursuit of this Decree all the country's forces and means were made available for its revolutionary defence. It was made binding on all the Soviets and revolutionary organisations to defend every position to the last man to evacuate all that was of value from regions threatened

S. V. Lipitsky: "Lenin's Guidance of the Country's Defense Establishment and Functioning of the Soviet Republic's Higher Defence Bodies, 1917-20." Moscow, Political Literature Publishing House, 1979. 304 pp. (in Russian).

with mobilisation to the rear and to destroy everything the enemy might use for his own benefit, to mobilise all the able-bodied population in the front-line zone for building defence positions, to suppress all publications hostile to Soviet power and suppress without mercy all enemy saboteurs.

In accordance with the Decree the forces of the government of Petrograd (then the capital of the country) and the Baltic Sea Fleet were placed in a state of readiness on February 23, 1918. The factories and plants of Petrograd and other cities and towns held meetings and rallies to recruit volunteers for the fighting detachments that were being formed. Soviet forces hastily sent to the front engaged the regular divisions of the German army and stemmed their advance. Thus, February 23 entered history as the birthday of the Red Army.

On March 2, 1918, the Soviet Government announced complete demobilisation of the old tsarist army. All the large formations, their command and staffs were disbanded. Now the entire weight of the country's defence lay on the shoulders of the Red Army that was just being formed.

In a resolution on war and peace adopted on March 6, 1918, the 7th Congress of the Communist Party considered it necessary to introduce universal military training for the adult population.

The Party decided to build up a centralised, strictly disciplined regular army. The petty-bourgeois parties, such as the Mensheviks, Socialist-Revolutionaries and Anarchists, fiercely resisted this course. They upheld the principles of pseudo-revolutionary freedom, guerrilla-style warfare, parochialism and decentralisation. As V. I. Lenin put it, the question was "whether proletarian discipline and organisation will prevail, or whether victory will go to the petty-bourgeois element."

The author of the book shows in detail the way the Communist Party consistently pursued the Leninist course in military development.

On March 3, 1918, V. I. Lenin signed a decision of the Council of People's Commissars on the formation of a Supreme Military Council which was put in charge of all military operations. All military establishments and servicemen without exception were subordinated to it. A staff was formed under the Supreme Military Council, comprising operations, organisation, artillery, engineer, military administration, supply, medical and other departments and divisions and an inspectorate.

The Party Central Committee examined every candidate nominated as a member of the Supreme Military Council. V. I. Lenin not only effected its general guidance, but not infrequently gave it concrete directives and orders on operational and organisational matters.

The establishment of a local military administrative system played a big role in building the Red Army. This system comprised a streamlined network of regional, area, district and sub-district military commissars. Working jointly with the local Soviets they registered, trained, mobilised and sent to every unit citizens liable for military service. They also registered the material means that were essential for the army. The military commissars were also responsible for carrying out universal military training of the working people.

Owing to a sharp aggravation of the situation on the battlefronts of the Civil War and intensification of imperialist aggression, the All-Russia Central Executive Committee of the Soviets adopted on May 29, 1918, a decision on the switchover from the voluntary principle of

recruitment to universal mobilisation of the workers and poor peasants, to the formation of a regular army based on the obligation of the working people to fulfil their patriotic military duty.

Another decision the All-Russia Central Executive Committee passed on September 5, 1918, declared that the Soviet Republic was being turned into a single military camp and that all the fronts and military establishments were being placed under the Revolutionary Military Council of the Republic with a single Commander-in-Chief. This was a new supreme military control body invested with broad powers.

The system of bodies of centralised military leadership was completed towards the end of November 1918, when the Workers' and Peasants' Defence Council was set up with Lenin as Chairman. Enjoying extraordinary powers the Defence Council set the country on a military footing to coordinate the efforts of front and rear. All the people's commissariats (ministries) and the Revolutionary Military Council of the Republic were subordinated to it.

In the multifaceted activity of the Defence Council, the book tells us, many features of Lenin's style of work were particularly manifested. These were bold revolutionary scope, organisational efficiency, the ability to establish the key position in a difficult situation and to concentrate all efforts on its quick solution, effective control over execution and obligatory completion of every undertaking. V. I. Lenin, leader of the Communist Party, head of the Soviet Government, chairman of the Defence Council, embodied and persistently realised the principles of unity of political, state and strategic leadership.

The Eighth Communist Party Congress held in March 1919 played a big role in building up the country's defence capacity and developing the Red Army. The Congress finally approved and developed the plan for building up a powerful regular army outlined by the Central Committee and tested by practical experience. The purpose of this plan was to create a regular army characterised by lofty political consciousness, high morale, conscientious discipline and firm centralised control. The congress adopted a new Programme of the Russian Communist Party (Bolshevik), decisions on a firm alliance of the working class with the middle peasants, a resolution on the military question and a number of other documents. These documents laid down the political preconditions for future military successes and outlined a reliable course for the successful defence of the achievements of the October Revolution.

To enhance Party-political work in the army the Congress instructed the Central Committee of the Party to set up a Political Department of the Revolutionary Military Council of the Army and Navy of the All-Russia Bureau for Military Commissars, to place a member of the Party Central Committee at the head of the new Department and make him a member of the Revolutionary Military Council.

The Political Department (later renamed the Political Administration) of the Revolutionary Military Council functioned as the Military Department of the Party Central Committee. In this way the Party Central Committee assumed direct control of the organisation of Party-political and educational work in the armed forces and effected guidance over this work.

The alliance of the working class with the working peasants grew stronger. Side by side with this, a military-political alliance between the various Soviet Republics (formed on the territory of the former Russian Empire) was taking shape and acquiring strength.

Proceeding from a wealth of factual material the author reveals the entire complex of political, economic, diplomatic and military defence measures designed to save the Soviet Republic in that very difficult situation. It shows that it was the Central Committee of the Communist Party headed by V. I. Lenin that outlined, coordinated and implemented these measures through Party and state channels.

Thus the system of military guidance and control bodies set up by the Soviet Republic did not copy the methods or structure of the military staff of bourgeois states. Contrary to the age-old traditions and ideas it was a Party body—the Central Committee of the Russian Communist Party (Bolsheviks)—that effected political and strategic direction of the war. The Revolutionary Military Council of the Republic, which consisted almost entirely of Communist Party workers was the supreme body of control over the armed forces.

The book ends with a quotation from V. I. Lenin revealing the decisive role of the Communist Party's guidance and organisational efforts in securing victory over the White Guard troops in the Civil War. He wrote:

"It was only because of the Party's vigilance and its strict discipline, because the authority of the Party united all government departments and institutions, because the decisions issued by the Central Committee were adopted by tens, hundreds, thousands and finally millions of people as one man, because incredible sacrifices were made—it was only because of all this that the miracle which occurred was made possible. It was only because of all this that we were able to win in spite of the campaigns of the imperialists of the Entente and of the whole world having been repeated twice, three and even four times."

The experience accumulated during the Civil War and foreign military intervention was creatively applied by the Communist Party of the Soviet Union during the Great Patriotic War of 1941-45. It is still valid today.

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MILITARY SCIENCE, THEORY, STRATEGY

TACTICS: METHODS DESCRIBED

Moscow SOVIET MILITARY REVIEW in English No 1, Jan 81, pp 21-23

[Article, published under the heading "Combat Training," by Maj Gen I. Vorob'ev, D. Sc. (Military); "Principles of Tactics"]

[Text] The principles of the art of war are the main propositions reflecting the actual natural development of warfare. They are historical. Some principles lose their significance, new ones appear. Others, preserving their validity for a long time, acquire a new content. This article tells how the main principles of tactics have changed and developed.

The principles of tactics reflect the general scientific-theoretical level of development in this field of the art of war. They are a concentrate of all previous experience of fighting and battles and of the combat training of forces in peacetime. The vital force of these principles lies in the fact that they result from the objective laws of war, taking in everything new connected with the development of technology and weapons, the rising training standards of the personnel and the changes in the conditions and character of combat actions.

The basic principles of tactics today are formulated in the same way as during the Great Patriotic War. But the main principles of the art of war are in constant evolution, they are acquiring a new content, duly reflecting the changes in the material basis of warfare. At the contemporary stage the development of the principles of tactics is influenced considerably by nuclear-missile weapon, perfection of conventional means of de-

struction, and of the means of troop control and logistics.

Exercising troop control in battle the commander is guided by the principles of the military art which serve as points of departure, reference points by keeping to which it is easier to find the way to victory.

COMBAT ACTIVITY

The principle of combat activity is one of the important principles of tactics. Essentially it means that all other conditions being equal, victory attends him who acts with the greater resoluteness, energy, tenacity, and ingenuity in the struggle to seize and maintain the initiative, is courageous and active in frustrating the enemy's plans and intentions and imposes his will on the enemy.

This principle of the art of war was used skillfully by the Soviet Command during the Great Patriotic War. Their combat activity was apparent in their skillful organisation and determined actions in the most complicated conditions.

The Soviet commanders employed in battle different tactical methods, frequently unexpected, unknown to the enemy, skilfully using combat capabilities of weapons and equipment, striking at the most vulnerable points in the enemy combat formation, achieving his rout piecemeal, surrounding enemy groupings, swiftly pursuing the withdrawing forces, frequently forestalling the enemy in delivering fire and manoeuvring.

In contemporary conditions the greatly increased fighting, firing and manoeuvring capabilities of units and subunits provide the objective requisites for wider use of the principle of combat activity in carrying out combat missions. It will be embodied in the increased depth of simultaneously delivered blows at the enemy, rapid manoeuvre with forces in the air as well as on land, in rapid transition from one method of combat actions to another, in increased speed of advance, continuous fire at the enemy, and greater variety in the manner of his destruction.

It is sometimes said that conditions for displaying activity exist chiefly in an offensive battle or a meeting engagement, whereas in the defensive they are limited. Defence does indeed rely on the positional stability, stanchness and stubbornness of the troops. But it is by no means an equivalent to passivity. The defenders have many possibilities for using active forms and methods of fighting.

The following episode took place at a tactical exercise. A motorised infantry battalion was assigned the mission to firmly hold a road junction with a group of hills adjoining it. In a short time the subunits created a developed fire system and skilfully organised the occupied positions with engineer works. When reconnaissance made known the "enemy's" preparations for an offensive the battalion commander instructed his supporting artillery to lay a fire barrage on the enemy concentration area. Subsequently fire at the attacking "enemy" increased and reached its greatest intensity in repulsing the attack. In that defensive action the battalion commander skilfully manoeuvred with men and equipment and repulsed the attackers' blows in good time. When the "enemy" was stopped the battalion subunits together with the regimental second echelon counter-attacked a subunit which had penetrated the defences and hurled it back to its starting position.

In this episode the activity of the defenders took the form of continuous fire blows at the attackers and flexible manoeuvring with forces,

weapons and fire. A resolute counterattack was the highest manifestation of that activity.

Activity in defence can understandably be expressed in other forms. These include striking at the enemy with planes and combat helicopters, dropping paratroop forces, skilfully mining the ground and misleading the enemy as to the structure of the defence system.

The enemy also naturally strives to display activity. Hence it is important in all kinds of battle to maintain subunits in high combat readiness, to ensure continuous reconnaissance and provide all-round support of the forces in action. In short, when delivering a blow one must be ready to beat off enemy counterattacks, react by a countermeasure to the enemy manoeuvre.

As we see, one of the leading principles of tactics during the Great Patriotic War has remained unchanged in its outward manifestations. But the ways of implementing it on the battlefield have radically changed.

CONCENTRATING THE MAIN EFFORT

The principle of concentrating the main effort undergoes an equally serious evolution under the influence of the new means of warfare. During the Great Patriotic War this principle meant massing on breakthrough sectors great quantities of manpower and equipment—some 250-300 guns, 40-60 tanks and other materiel per kilometre of frontage. In contemporary conditions the principle of concentrating the main effort at the decisive time and in the decisive place is materialised differently. Concentration of large masses of troops in compact bodies is risky because of the danger of a nuclear blow. Qualitative superiority over the enemy is achieved by the power of fire weapons, the striking force and mobility of the forces. The increased mobility and quick-action of weapons frequently counterbalance and compensate numerical superiority.

The principle of concentrating the main efforts in battle requires high tactical skill on the part of the commander. It is important to define the main objective of actions in good time, to observe the correct proportion between the purpose and the available means; to use the most effective weapons in the direction of the main blow, to display originality in choosing the methods of routing the enemy.

Unfortunately some commanders do not always follow this principle skilfully at tactical exercises.

The most common mistake is even distribution of efforts along the frontage, particularly in defence. Lacking sufficient data on "enemy" intentions and the direction of the "enemy" blow, the commander of a subunit in defence strives to be equally strong everywhere. In fact, dispersing his efforts along the frontage, he becomes weak everywhere.

COOPERATION

The qualitative changes in the material basis of warfare have greatly influenced the content of the principle of cooperation. The modern battlefield is being more and more saturated with weapons varying in purpose and tactical and technical capability, control facilities, radio-electronics, means of combat and logistic support. Simultaneously the content and character of combat actions undergo changes, the intensity of the struggle on land and in the air to gain and maintain the initiative, to achieve fire superiority and gain time increases, and the spatial extent of the fighting, its dynamism and manoeuvrability are enhanced. As a result, the importance of accurate and continuous coordinated combat efforts of manpower and equipment, the volume and content of the work of the commander and his staff in organising and carrying out cooperation increase. But the time allotted for this work steadily decreases.

High skill in the practical application of the principle of cooperation and mobile and firm troop control in battle are required of the commander and his staff. Practice shows that if officers have no deep knowledge of the combat capabilities of the materiel and the principles of its use in battle they will not be able to make full use of them or to coordinate their subunits' actions accurately according to target, lines and time.

SURPRISE

The importance of the commander's understanding the essence of the main principles of tactics and the trends of their inner development can be

seen from the way the principle of surprise is applied in practice.

The commander always strives to take the enemy by surprise, to use his unpreparedness to repulse the blow, to forestall him in actions, to stun him by using new, original tactical methods, to gain time, to secure advantageous conditions for manoeuvre. In contemporary conditions the increased speed of actions, range of weapons and mobility of the materiel provide particularly broad possibilities for delivering surprise and daring blows. During the last war it took forces operating mainly in unmounted formation no less than two hours to advance within the distance of 8-10 km from the objective. Today, as the foreign military press emphasises, motorised infantry mounted on vehicles is capable in 20-30 minutes not only of covering such a distance but also of preparing to strike a blow. The speed of combat actions of forces has in this respect increased 4-6-fold and this limits the possibilities of disclosing enemy intentions and taking the necessary countermeasures.

The use of helicopters—an effective many-purpose weapon—in battle does much to increase the role of surprise. Thanks to their increased mobility, units and subunits can perform rapid movements, regroup, concentrate efforts for a surprise blow at the enemy from any direction—from the land and the air, from the front, flanks and rear, rapidly negotiate natural obstacles, contamination and destruction zones, shift combat efforts to the depth of the enemy positions, etc. Particularly effective are undetected landings of airborne troops whose daring and swift actions can considerably strengthen the surprise effect of a frontal attack.

It is clear that to achieve surprise in battle one must know enemy tactics well and be able to detect how his men and weapons are grouped, their composition and weak spots. Commanders and staffs must show skill in choosing the methods of attack, delivering a fire blow, using manoeuvre. Surprise cannot be achieved without strict observance of camouflage, broad and skilful use of nighttime conditions.

An examination of other principles of tactics leads to the conviction that they remain unchanged only in their form while their content is constantly renewed and developed. The main difficulty for a commander is not to know well the main principles of the art of war (which in itself is of no small importance) but to learn to use them skilfully in practice.

MINISTRY OF DEFENSE AND GENERAL STAFF

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MINISTRY OF DEFENSE AND GENERAL STAFF

COL GEN SRDIN ON ARMED FORCES DAY

Moscow SOVIET MILITARY REVIEW in English No 1, Jan 80 pp 5-9

(Article by Col Gen G. Srdin, 1st dep chief of the Main Political Directorate of the Soviet Army and Navy: "Guarding Peace and Socialism")

(Text)

The Soviet people and their servicemen are celebrating the 62nd anniversary of the Soviet Armed Forces in the context of our country's material and spiritual efflorescence, of political and labour enthusiasm. The last few years have witnessed substantial progress in the country's social development along all lines. Today the Soviet state has a vast economic, scientific and technological potential. It has also built up a sound defence capacity.

The USSR's outstanding achievements are the result of the wise policy of the Leninist Communist Party, the creative energy and labour heroism of the working class, collective farmers and intelligentsia. The officers and men of the Soviet Armed Forces, who are vigilantly standing guard over the national interests of the USSR, protecting the peaceful constructive labour of their people engaged in building communist society have made no small contribution to the achievements of their people and country.

The growing might of the Soviet Army and Navy is rooted in the triumphant Great October Socialist Revolution, in the establishment of a workers' and peasants' state which has undertaken to build up socialism. It is inseparably connected with the ideas of V. I. Lenin, the brilliant leader of the working people and strategist of the proletarian revolution. His ideas on the defence of the Socialist Homeland form an essential part of the theory of socialist revolution. V. I. Lenin was the organiser of the first socialist army, an army of a new type, called upon to defend the freedom and independence of the world's first state of working people. The noble aims of the

Soviet Army have always been an inexhaustible source of its strength and mass heroism of the servicemen.

The Soviet Armed Forces are the flesh and blood of their people. They enjoy the love and respect of the Soviet people. Comrade L. I. Brezhnev, General Secretary of the CPSU Central Committee, Chairman of the Presidium of the USSR Supreme Soviet, said:

"The Soviet Army is part of our people and shares their interests."

This attitude of the people towards their army is determined by the fact that it defends their vital interests and the socialist system — the world's most progressive social system.

The armies of the capitalist states have always been and still are an anti-popular force, the armed force of the ruling exploiting class, an instrument for enslaving and oppressing the working people in the respective capitalist countries and for aggressive policy with respect to other peoples. There can be no real unity between the armies of capitalist states and the working people, because the oppressors and the exploited cannot have common interests and aims. Although the rank-and-file of the bourgeois armies are mostly drawn from the working sections of the population, the bourgeoisie manages to isolate the army from the people, to turn it into an obedient instrument which executes the will of the ruling class and to use it in pursuit of its reactionary anti-popular aims. The bourgeoisie achieves this through brain-washing of the servicemen, barring them from the social and political life of the country and demo-

ciatic movements, through threats and use of force.

Socialism has emancipated the masses of people from exploitation, from all social and national oppression. It has created an army of a new socialist type. Its personnel are linked by inseparable ties with the people.

Since the Soviet Armed Forces were created 63 years ago they have stood up to the most rigorous trials in battles against numerous enemies who tried to destroy the Soviet state. Inspired by the Communist Party to defend the achievements of the Great October Socialist Revolution and their Homeland the Soviet Army and Navy scored victories of epoch-making importance during the Civil War and the foreign military intervention (1918-20) and in the Great Patriotic War (1941-45).

After the war the Soviet Armed Forces have been defending their Socialist Homeland and the achievements of world socialism. The USA and its supporters have launched the world into an unprecedented arms race which is constantly being speeded up by the dangerous war preparations of NATO and the other aggressive imperialist blocs. In this context the Soviet Army and Navy, and the Allied armies of the Warsaw Treaty member countries form a formidable barrier to the attempts of the warmongers eager to start the conflagration of another world war. The very existence of the Soviet Armed Forces which are provided with the latest weaponry and other combat equipment and are ready at all times to repel any aggression has a sobering effect on the warmongers and is a stabilising factor in the fight for peace on the earth.

The CPSU has always believed that the stronger the ties between the army and the masses of people the more successfully it will live up to its historic purpose. The slogan proclaimed by the Party "All that the people have created must be reliably defended!" has become a programme for the Soviet people and their Armed Forces. It clearly reflects the profound ties between the Soviet Armed Forces and their people, their monolithic unity.

The Soviet people love their Armed Forces and do their best to make them equal to their tasks in the present situation. The splendid achievements of the USSR's socialist national economy, Soviet scientific and technological achievements have made it possible to provide the Soviet Armed Forces with the latest weaponry and other combat equipment. They have strategic, operational and tactical nuclear weapons, missile and antiaircraft missile complexes, modern fighting aircraft and tanks, advanced artillery systems, means of communication, radicelectronic, radio and radar equipment for various purposes, automated con-

trol systems and computing equipment. The main combat might of the navy consists of submarines, including atom-powered ones, with nuclear missiles and conventional armaments. The navy also has modern high speed surface ships of various types and an air arm capable of operating at great distances from their bases.

This powerful weaponry and other combat equipment are manned by skilled and proficient servicemen, patriots boundlessly devoted to their Homeland, internationalists. They carry out their honourable duty with a sense of lofty responsibility, displaying constant vigilance against the intrigues of the imperialists.

Soviet servicemen persistently master their weaponry and other combat equipment and learn the skills needed for war. The army and navy are engaged in a broad socialist emulation movement to secure increasingly better results in combat training and political education. The servicemen are diligently working to become rated specialists, to earn the right to the title of advanced crew, subunit, unit or formation.

Communists and YCL members are in the vanguard of the socialist emulation movement for high combat skill. The Party and YCL organisations are instilling in the men a sense of personal responsibility for exemplary execution of service duties and for maintenance of constant readiness for combat in the units.

Both in time of peace and in the period of war trials the Party organisations have been and continue to be the cementing element of military collectives. They impart to all the men a spirit of discipline, organisation and creative attitude to the execution of missions assigned by the Command. The Communists are reliable assistants of the commanders in improving instruction, achieving high standards in combat training and political education and in mastering weapons and other combat equipment.

In carrying out the decisions of the 25th CPSU Congress the Party organisations have made progress in the ideological steeling of the personnel and further strengthened their structure. In the four years since the congress was held the number of Party organisations has increased in sub-units and quite a few advanced servicemen have been admitted to the Party. This has raised the level of activity in Party work and increased its influence on the life of military collectives.

The Soviet Armed Forces carry out regular ideological and political education to enable the servicemen to gain a deeper insight into the home and foreign policy of the CPSU and the Soviet state, the current world situation and their tasks arising therefrom. This work consolidates their communist convictions and develops in them

a conscientious attitude towards the fulfilment of their military duty. Special attention is paid to explaining V. I. Lenin's behests on the defence of the Socialist Homeland and the essence of the struggle between the socialist and imperialist systems in the world arena.

Today the role of Party-political work in the forces has increased. This is a consequence of the acute ideological struggle in the international arena and the higher demands on the moral and combat qualities of the personnel presented by the changes in the equipment of the forces and the methods of warfare resulting from the scientific and technological revolution. That is why the Communist Party spares no pains to improve Party-political work and to make it more effective. The level of general education of the servicemen being much higher since the war, this factor has been taken into account in organising Party-political work. At present close on 80 per cent of the total strength of the army and navy have a higher or secondary education, whereas before the Great Patriotic War a figure was only 12 per cent. Practically all posts from brigade commander and higher and 80 per cent of the posts of regimental commander are held by officers with higher education. The overwhelming majority of political workers have higher general or military education. Since the war the proportion of engineers and technicians has increased four to one. Over 90 per cent of the officers are Communists or YCL members.

The high general educational level of officers and men enables them to master combat equipment and military science in less time. However, at the same time it makes more serious demands on the standards of political instruction and ideological education of the personnel. The forces are provided with the most favourable conditions for the personnel to master political knowledge and broaden their mental horizons. Various forms of instruction are used for the purpose. Comrade L. I. Brezhnev's books "Outstanding Questions of Ideological Work of the CPSU," "Small Land," "Rebirth," "The Virgin Lands," and "Standing on Guard over Peace and Socialism" play a big role in political work with servicemen. These works have become an important means for the ideological education of army and naval personnel.

Promotion of combat traditions plays a big part in moulding lofty moral and fighting qualities in Soviet servicemen. Young soldiers and seamen are acquainted with them not only through books and motion pictures. The units have rooms of combat glory which contain documents, relics and other materials on the combat record of the unit or formation, and on the feats performed by the officers and men who served in them. Many

garrisons have museums of combat glory. Such activities as lectures, seminars and talks about the victories of the Soviet Army, the heroic deeds performed by the fathers and grandfathers in battles for the Homeland, and meetings with war veterans inspire the men with a sense of pride in their Armed Forces and readiness to act as the heroes did when they won glory for the colours of the units and ships. Officers and men regard them as heirs of glorious revolutionary and comb. editions, multiplying them by everyday military labour.

The Soviet Armed Forces conduct varied cultural and educational work. Military units and sub-units have regular film shows. They have efficient clubs and libraries. The Soviet Army is the most well-read army in the world. The libraries of the forces have a book stock of over 116 million volumes. Military units and ships are well supplied with central and local papers and magazines. Officers' and Soldiers' Clubs run several hundred people's universities of culture. Every military unit has stationary and portable motion picture projectors and a radio relay station. Companies and batteries have TV sets. Military dance and song ensembles, army and fleet theatres, and professional theatre companies perform for units and ships.

In the Soviet Armed Forces young men have broad possibilities to extend their technical knowledge, to acquire special knowledge in military science and combat equipment, and to enjoy the benefits of spiritual culture. In the army a young man not only passes through a good school of life, but also acquires sound ideological steering.

Although a two- or three-year period of service is not very long, the commanders and political workers equip the young serviceman with knowledge essential for military service and useful for later civilian life. Having mastered elaborate modern military equipment, machines and mechanisms and acquired specialised knowledge, every serviceman returns from the army as a skilled tradesman with a higher level of skill than when he joined the army.

Service in the Armed Forces is a good school of education for a young man. Having received him from his family, school, institute or the work collective of a factory or collective farm the commanders, political workers, Party and YCL organisations of units and ships continue his education in the Armed Forces.

While defending the country against external enemies, the personnel of the Soviet Armed Forces take an active part in the country's social and political life. Army and navy collectives discuss the outstanding political events of internal and in-

ternational life. Servicemen participate in elections to the supreme and local bodies of state power, electing their representatives to these bodies, and in solving the many social, state and economic questions confronting their Homeland. Over 17,000 servicemen have been elected to the Supreme Soviet of the USSR, Supreme Soviets of the Union and Autonomous Republics, territorial, regional, city, town, and district Soviets of People's Deputies. Railway troops are building a section of the Baikal-Amur Railway. Every autumn servicemen help the collective farms and state farms gather the harvests in Kazakhstan, the Altai and Krasnodar territories and other districts of the country. This aid is a major contribution to the effort of rural workers.

In a way the army is a school training personnel for the national economy. Every year after honourable discharge of men from the army and navy after their period of active service the factories, plants, collective farms and construction sites, especially in the less developed areas of the Far North and Far East receive tens of thousands of skilled men. The training the men get in the forces enables them to show an excellent performance in places where not only professional skills, but also civic maturity and will power are necessary.

Thus, the Soviet Army actually participates in the carrying out of the Party's economic strategy.

and policy. It contributes to developing the society's productive forces, to building the material and technical basis of communist society and to improving the people's living standards.

Another social function of the army is its participation in educational work among the population. In the past the Soviet Army did much to abolish illiteracy in the country. Today military units actively help local bodies in the military and patriotic education of young people and in preparing them for army service. YCL members serving in the army and navy have helped organise thousands of technical, military sports circles and schools. Military educational establishments are establishing ever firmer contacts with schools of general education, technical schools and institutes.

The history of the Armed Forces of the USSR, their victories and achievements in service are inseparable from the outstanding progress of the Soviet people. The source of their might lies in their unity with the people. Rallied closely round the Communist Party and enjoying the love of the whole people, Soviet servicemen together with the servicemen of the armies of the socialist community vigilantly stand on guard over the peaceful constructive effort of the fraternal peoples. They are carrying out with honour the historic mission of defending peace and socialism.

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MINISTRY OF DEFENSE AND GENERAL STAFF

BIOGRAPHICAL DATA ON MARSHAL SU CHUYKOV

Moscow SOVIET MILITARY REVIEW in English No 1, Jan 80 pp 42-44

[Interview, under the heading "Our Calendar" of Mar SU Chuykov by Lt Col N. Kurov: "Soldier of the Lenin Enrolment". In the article "Chuykov" is spelled "Chuikov"]

[Text]

On February 12, 1980, Marshal of the Soviet Union Vasily Ivanovich Chuikov, twice Hero of the Soviet Union, will be eighty years old. He has been serving in the Soviet Army since 1918. He took part in the Civil War (1918-20) and in the Great Patriotic War (1941-45). He commanded the 62nd Army, which was renamed the 8th Guards Army. His army fought its way from the banks of the Volga to Berlin. After the war the marshal was Commander of the Group of Soviet Forces in Germany and of the Kiev Military District, Commander-in-Chief of the Land Forces and Chief of Civil Defence of the USSR. At present he is a member of the group of general inspectors of the Ministry of Defence of the USSR. Vasily Chuikov is a deputy to the USSR Supreme Soviet and member of the CPSU Central Committee. He is the author of a number of memoirs, e.g. "Beginning of the Road," "Guardsmen of Stalingrad March Westwards," "The End of the Third Reich," "Steeling of Youth in Battle."

On the eve of his eightieth birthday Marshal Chuikov gave an interview to Lieutenant-Colonel N. Kurov, a correspondent of our magazine.

Comrade Marshal of the Soviet Union, you have been with the Soviet Armed Forces for more than 40 years of their glorious combat history. Would you please tell our readers how you joined the ranks of the defenders of the Soviet Republic?

I could not dream of a military career. My father, a poor Russian peasant, could barely support his big family. At 12 I had to go to work in Petrograd. I was there when the Great October Socialist Revolution broke out. At the time three of my elder brothers were sailors in the Baltic Fleet. It was they who first told me about Lenin and acquainted me with Bolshevik papers and leaflets. I took part in workers' actions. I saw the troops of the bourgeois Provisional Government fire on working people's demonstrations. So I knew what side of the barricades my place was on.

Early in 1918 I returned to my native village. The situation was alarming. The enemies of the Revolution were sabotaging the decisions of the Soviets and organising rebellions against them. The papers were telling about the economic blockade of the country, the foreign interventionists' and White Guard troops' offensive against the Soviet Republic. Together with several friends I decided to join the Red Army and went to Moscow. There we were enrolled as cadets of the First Moscow School of Military Instructors. We studied intensively. There was no time to waste. The Soviet Republic was surrounded by a ring of enemy battle-fronts.

While you were studying in Moscow, you were fortunate enough to hear Vladimir Ilyich Lenin address Red Army men. Would you kindly share your impressions of these meetings with our readers?

I saw the leader of the revolution and heard him speak on two occasions. On July 2, 1918, we were told to gather in the riding hall of our military school, which was then being used as a canteen. When we entered, we saw that the tables had been removed and a rostrum erected. There were about 1,500 Red Army men and newly mobilised workers facing it. They were all obviously waiting for somebody. Suddenly the door opened and a man of middle height quickly walked to the rostrum. A powerful wave of applause rolled through the riding hall. People in the hall shouted with enthusiasm: "Lenin! Lenin!" Vladimir Ilyich quickly mounted the rostrum and raised his hand asking for silence. When the cheering subsided, Lenin said: "Comrades..." The leader's speech bore a note of trust and warmth as though he was continuing a talk with true friends, which had been interrupted, discussing affairs and cares with them. Lenin's words and gestures seemed to draw people closer to him. He spoke to them as to equals.

It is difficult to put into words what I felt when I heard Lenin. I was carried away by his speech. Lenin's words sounded like a call to perform feats of valour and selfless deeds in the name of a great cause. Lenin called on the Red Army men to put their hearts into their studies, to become competent in military science so as to be able to defend the Soviet Republic against the frenzied onslaught of the interventionists and White Guard troops. When he fi-

nished his speech, the audience broke into a stormy ovation. He descended from the rostrum and briskly walked to the door. There he stopped, turned to us, and, smiling, waved his hand... The cadets would not leave the riding hall for a long time. Deeply moved, they were discussing every word Lenin had said. It was then that I decided to devote my whole life, if necessary, to the defence of the working people.

I next saw Lenin just before my departure to the Eastern Front in autumn 1918. We, Red officers, were invited to attend a meeting of the All-Russia Central Executive Committee* at which Lenin delivered a speech. After the meeting we left immediately for the railway station. After Lenin's speech we all felt greatly inspired. It seemed that there were no barriers we could not surmount.

I understand that during the Civil War you fought on the Southern, Eastern and Western fronts. You were commander of an infantry regiment and were twice awarded the Order of the Red Banner. What were the most vivid events you experienced in your fighting youth?

I shall never forget May 7, 1919. Although several decades have passed since then, I always feel joy when I recall that day, because I was admitted to the Communist Party. I was extremely excited when they told me that in the evening a Party meeting would discuss my application for membership. I asked myself time and again: was I worthy of the honour of being a Party member? I was admitted unanimously. I shall always remember the joy and pride I experienced. It was great to be in the same Party with Lenin and to carry in your breast pocket a Party card identical to his.

I should mention that, when I became a Communist, I understood more clearly the role of Party-political work in subunits. I also saw that a commander who was a Communist at the same time enjoyed greater prestige with the men, most of whom were non-Party people. I shall never forget Pavel Denisov, commissar of my regiment on the Eastern Front. He had been a worker in the Ural region. He had a wonderful gift of explaining everything clearly to the men and commanders. And in battle he was always on the sector where a critical situation was taking shape. Several times I went into the assault shoulder to shoulder with him. He was mortally wounded in a skirmish line...

What did you do after the Civil War?

The same as hundreds and thousands of other Red Army commanders. We had acquired a wealth of combat experience, quite different from the experience gained by the Western armies in the First World War. In contrast to the latter the Civil War was characterised by mobile warfare, resolute and uncompromising armed struggle. It was necessary to understand this experience and draw the right conclusions for the future. We knew that the imperialists would

* The All-Russia Central Executive Committee was until 1937 the supreme legislative, administrative and control body of the Russian Soviet Federative Socialist Republic.

not leave us alone. That was why we readily responded to Lenin's call: "Study, study and study." The army was being re-equipped with modern weapons, and Soviet military theory was developing rapidly. Those years were packed with intensive service and persistent study. I completed the M. V. Frunze Military Academy and then studied at the Academy of Mechanisation and Motorisation.* I was given command of a mechanised brigade, an infantry corps and then an army.

I would like to stress that an officer must always study. Life and military science making steady progress, it is necessary to keep abreast of all developments. It is the duty of the commander constantly to improve his knowledge—independently, at military educational establishments and courses. Profound knowledge enables the officer to think flexibly and creatively. He is thus able to discard all that is unnecessary in the given situation. He can devise new methods of struggle against the enemy and of troop control. This has been fully confirmed by the experience of the Great Patriotic War.

It was precisely the commanders and military leaders of my generation that had to fight the Hitler Wehrmacht—the most powerful war machine of the capitalist world. This generation produced such distinguished military leaders as Marshals G. K. Zhukov, A. M. Vasilevsky, I. S. Konev, K. K. Rokossovsky, R. Ya. Malinovsky and L. A. Govorov. Under their guidance the Soviet forces scored many brilliant victories. The commanders exhibited a creative approach to the fulfilment of combat missions. For instance, during the Battle of Stalingrad the officers and generals of the 62nd Army skilfully employed active defence tactics and devised new methods of warfare. As a result, the enemy was unable to make full use of the tremendous superiority of manpower and means he enjoyed during the defensive period of the fighting, especially in aircraft, artillery and tanks. In the fierce struggle with German fascism Soviet military thought, Soviet military leaders and commanders secured victory. They convincingly demonstrated their superiority over the military thinking and the commanders of the Nazi army.

Comrade Marshal of the Soviet Union, what distinguishing features are common to the different generations of Soviet servicemen?

Devotion to the ideas of the Great October Revolution. It was those ideas that were the source of mass heroism displayed by Soviet officers and men during the Civil War and the Great Patriotic War. In the Battle of Stalingrad Hitler and his generals did the impossible to take the city, but could not. Though the Nazis broke through into the streets of Stalingrad, they were unable to break down the resistance of the Soviet officers and men who swore they would

not allow the enemy to pass. The Communists were always in the forefront. In the assault they were the most determined fighters, in the assault groups they were the most resourceful, in the defence they displayed the greatest endurance and staying power. The members of the YCL played an outstanding role in repulsing the enemy onslaught. They exhibited lofty moral and combat qualities. In my memoirs I quoted the minutes of a YCL meeting held during the battle in a subunit of the 308th Infantry Division. Here they are:

"We heard a report on how members of the YCL should behave in battle. We decided that it would be better to die in the trenches rather than to disgrace ourselves by retreating..."

Question to the speaker: Is there a valid reason for abandoning a firing position?

"Answer: Of all possible reasons justifying such a step, only one will be considered, namely, death."

The Nazis could not take a single position in Stalingrad until all of its defenders were killed or badly wounded.

The name of Ivan Pyodorov, YCL member, is engraved in letters of gold on the marble banners in the hall of glory of the memorial complex on Mamai Hill. He was a member of an antitank crew that beat off incessant panzer attacks and assaults of Nazi submachine gunners. When the gunlayer was killed, Ivan Pyodorov took over and scored hits on two tanks. Though all of his comrades were killed Ivan fought the Nazis with his submachine gun and hand grenades. A shell splinter shattered his arm. At that moment a German tank crawled onto the position he was defending. He took an antitank grenade and making a last effort, threw himself under its tracks. The grenade exploded stopping the enemy tank.

Speaking about the Soviet soldier, one must mention his spirit of internationalism and lofty humanism, which I repeatedly witnessed. I recall the fighting in Berlin in April 1945. Every step forward had to be paid for in human blood and lives. The men's hearts were burning with hatred for the Nazis who had brought so much suffering to their Homeland. But the Soviet soldiers knew they had not come to German soil as avengers, but as liberators of the German people from fascism, as envoys of the world's first socialist state. I repeatedly observed striking scenes: our soldiers who only a few moments before had emerged from heavy fighting were already leading German children from their mess tins, sharing their bread and tinmed rations with women and old people. Once I received a report about a fact accomplished by Sergeant Nikolai Masalov, colour bearer of one of the regiments of the 79th Guards Infantry Division. Defying enemy fire he saved a three-year-old German girl from Nazi bullets. Only men educated in the spirit of noble ideals could behave like that. The memorial to the Soviet soldier-liberator in Berlin's Treptow Park is highly symbolic. The Soviet soldier is holding a child he has saved, his sword resting with its point on the remnants of a fascist swastika at his feet.

* Today it is the Marshal of the Soviet Union R. Ya. Malinovsky Armoured Troops Academy

In the recent period the West has been running a slanderous campaign about a "Soviet military threat." Would you please comment on it?

Imperialism invented the myth about the "Soviet military threat" long, long ago, several decades ago. Though its name has varied, its purpose has always been the same. The imperialists used it as a screen to intensify the arms race, hatch and execute aggressive plans designed to destroy the Soviet state. I have been in the fire of many battles and I know what war is, what calamities, suffering and destruction it brings to people. As far as the Soviet soldier was concerned the moment of greatest joy for him was when the last shot was fired and peace finally set in. We have never threatened anybody. We took up arms only to beat off imperialist aggression, to fight for freedom and independence, to liberate other peoples from the yoke of German fascism and Japanese militarism.

I frequently visit military units. When I look at the young, vigorous faces of our officers and men, I feel confident that the cause of peace on the earth is in reliable hands. Today, in my declining years I am happy to realize that I have devoted my life to the defence of a noble and just cause.

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MINISTRY OF DEFENSE AND GENERAL STAFF

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MINISTRY OF DEFENSE AND GENERAL STAFF

YEPISHEV ON ARMY-NAVY DAY

Moscow SOVIET MILITARY REVIEW in English No 1, Jan 81, pp 2-6

[Article, published under the heading "February 23--Soviet Army and Navy Day," by Army Gen A. Yepishev, chief of the Main Political Administration of the Soviet Army and Navy: "On Guard Over Peace and Progress"]

[Text]

For more than sixty years the Soviet Armed Forces have been guarding our creative labour and socialist achievements. Their battle road and numerous victories over the enemies convincingly prove V. I. Lenin's conclusion that any revolution is worth something only if it can defend itself.

directed not against the people but at their defence, not at capturing foreign territories but at defending the Republic of Soviets against the encroachments of its numerous enemies. Already during the foreign intervention and the Civil War (1918-20), the fighting men of the young Red Army utterly defeated the united forces of internal and external counter-revolution.

AN ARMY OF A NEW TYPE

When the Great October Socialist Revolution of 1917 triumphed in Russia the working class faced the pressing task of defending its revolutionary gains. The objective necessity of building and developing a new system was conditioned by the reactionary policy of international imperialism, its striving to strangle the young Republic of Soviets. The Communist Party saw in the army of liberated workers and peasants who had taken political power into their hands the decisive weapon for the struggle against internal and external counter-revolution.

In extremely difficult conditions, literally under enemy fire, the Party created a mass disciplined Red Army, a genuine people's army in character and composition. From the first days of its existence it appeared before the world as an army of a new type. Its weapons have always been

The history of the first post-revolutionary years, provocative onslaughts organised by imperialism against the territory of the Soviet Union conclusively showed that the reactionary circles of the capitalist countries had not abandoned their attempts to strangle the young Soviet Republic by force of arms. Foreseeing the inevitability of a new armed onslaught of imperialism the Soviet people prepared thoroughly for the coming military trials.

The war unleashed by nazi Germany against the Soviet Union on June 22, 1941, signified the beginning of the greatest armed onslaught of the striking forces of imperialism against the USSR. In those stern years the question of life or death stood sharp as never on the agenda before the first socialist state in the world. An enormous historical responsibility lay on the Soviet Armed Forces in their struggle against the war machine of nazi Germany and her satellites, in the struggle which ended with the utter defeat of the aggressor. The Soviet Army brought freedom to many peoples of Europe and Asia and fulfilled its internationalist duty with honour.

The rout of nazi Germany and militarist Japan created favourable conditions for the victory of revolutions in a number of countries. Many peoples chose the road of socialist development. The world socialist system appeared. The crisis of the colonial system of imperialism was acutely aggravated and the national-liberation movement in colonies grew apace.

Such a course of events did not suit world reaction. Striving to prevent the further development of the world revolutionary process the imperialists unleashed the "cold war," stepped up the arms race and began atomic blackmail. The aggressive policy of the leading imperialist powers, in the first place the USA, led to the formation in 1949 of the North Atlantic Treaty Organisation (NATO).

The organisation of the Warsaw Treaty in May 1955 was a forced measure, an action in response to the creation of the aggressive NATO bloc under the aegis of the USA, and of other military groupings. From the first day of its existence this organisation has been purely defensive in character. The Warsaw Treaty member countries have never threatened anybody, never attacked anybody; they have never laid nor do they now lay claim to anybody else's territory; they do not interfere in the internal affairs of other countries. This community of nations was established first of all to counter the threat of imperialism and the aggressive military blocs created by it.

By its content, purposes and character the Warsaw Treaty differs radically from military blocs of capitalist countries, which serve as instruments for preparing wars and have an antinational reactionary essence and aggressive trend. History knows many examples when resolute and coordinated actions of the Warsaw Treaty countries in defence of peace paralyzed the aggressors, forced them to consider the strength and power of the socialist community. Thanks to the firm stand and the active countermeasures taken by the Warsaw Treaty member states quite a few aggressive plans of the imperialist powers against some socialist countries or against peoples fighting for their national independence were frustrated.

BULWARK OF THE PEOPLES' SECURITY

The Communist Party of the Soviet Union has always strictly observed and still observes Lenin's behest: to be always on the alert against the intrigues of imperialism, constantly keep the country's defensive capacity at a high level. During the postwar years the USSR Armed Forces have changed beyond recognition.

In its care for the reliable defence of the gains of socialism and the creative labour of the people, the CPSU invariably pursues the Leninist foreign policy course. No matter how loudly the bourgeois propagandists shout about a so-called Soviet military threat they cannot refute the obvious fact that the Soviet military doctrine is a defensive one.

All wars that the Soviet state and its Armed Forces were forced to wage were just wars. The Soviet Union has never armed for the sake of arming, it never was and never will be the initiator of the arms race. All that the Soviet people are doing in the military field, they are doing to protect themselves and their friends in the socialist countries against attack, not to allow aggression when the imperialist circles in the West face the USSR with an unrestrained arms race.

The Soviet people engaged in a creative construction cannot fail to take into account the fact that reactionary circles in the USA and other NATO countries are to blame for the noticeable complication of the situation in the world. The US military budget has been increasing year in year out. In 1981 fiscal year its "ceiling" will reach a record sum—170,500 million dollars. 51,300 million dollars were allocated to the Pentagon only for acquiring and creating up-to-date weapons.

The US "new nuclear strategy" proclaimed by President Carter not so long ago spells a serious threat to peace. Essentially it is meant to deceive public opinion and, under cover of talk about "blows at military objectives of the Soviet Union," to make the idea of a nuclear war more acceptable. Today, any talk of "limited" or "partial" use of nuclear weapons is devoid of sense and highly dangerous for the cause of peace.

The present Chinese leadership are playing a provocative role in the international arena. They openly support reactionary, militarist forces of imperialism, drawing closer to the most aggressive circles of the USA.

To justify the steady growth of military allocations, imperialist reaction tries to distort the peace-loving character of the Soviet military policy, the meaning of the peaceful initiatives of the Soviet Union and other socialist countries, to misinterpret the essence of other purely defensive measures. As is known, the Soviet state throughout its entire history has been tirelessly carrying out a struggle for peace, strengthening international security, military détente and disarmament. More than once the Soviet Union proposed to ban the production and use of nuclear, chemical and bacteriological weapons, has been and still is advocating disbandment of all military alliances, including the Warsaw Treaty Organisation.

Already at the International Conference in Genoa (1922) to which a Soviet delegation was invited, the Soviet state proposed universal and complete disarmament. Since then the USSR, following the programme directions of the CPSU drawn up at its congresses and Central Committee plenary meetings, has been consistently working to solve this task, thereby striving to strengthen peace and improve relations between all countries. During recent years alone the USSR tabled over 70 different suggestions for consideration by the corresponding international organisations. One of the latest moves was the new proposal of the socialist countries to reduce the armed forces and armaments in Central Europe and also proposals of the Soviet Union for negotiations concerning nuclear-missile weapons in Europe. These initiatives are practical measures in the field of military détente and are dictated by concern for the interests of world peace.

Against the background of the consistent peace-loving policy of the Soviet Union and other socialist countries the attempts of certain circles in the USA and their western partners to present the Soviet Union as a state ready to encroach on the freedom and independence of other peoples look particularly absurd. Talk about the so-called Soviet military threat is an obvious invention of the enemies of détente. The Soviet Union improves its defence so that the potential aggressors will not dare to try to solve the historical dispute between the two opposite social systems in their favour by force of arms.

The USA has more than once demonstrated to the entire world its readiness to do this by actively participating in the majority of the 150 wars and military conflicts that have been unleashed by the imperialists since 1945 and brought death to more than ten million people. It has been calculated that the USA has used its armed forces in 215 cases, i.e. once every two months for achieving its political aims. During this period it threatened 19 times to use nuclear weapons.

It is also a well-known fact that it is not Soviet bases that surround the USA but American bases that surround the Soviet Union (there are 386 of them only in the near approaches to the USSR borders). It was not the Soviet Union that created and dropped the atom bomb. It was not the Soviet Union who was the first to start building nuclear submarines with ballistic missiles. It was not the Soviet Union who was the first to start producing cruise missiles.

The policy of increasing international tensions, the arms race threats and blackmail carried out by the USA and its partners in military blocs cause great anxiety to peoples the world over. In these conditions they turn their eyes to the countries of socialist community, whose defensive might and material resources are a reliable guarantee of preserving international security and preventing a new war.

The Soviet Army is rightfully called the most important factor of peace. An instrument of war in a capitalist society, the army becomes a weapon for preventing war, a means of securing peace in conditions of socialism.

Naturally, like any military organisation, the army of a socialist state is intended for waging armed struggle. But its essence consists in the fact that its might is always directed against the forces... giving birth to aggression and war, at the support of the struggle of the peoples for freedom and independence.

The Soviet Union has rendered enormous assistance to many peoples of the world in their just, liberation struggle. As early as March 1919 Soviet Russia rendered help to Hungary, where a socialist revolution was victorious at the time. During the 1920-30s the Soviet state rendered various military and technological help to friendly Mongolia and also to the revolutionary forces of China and Spain struggling for their social and national liberation. By their victory in the Second World War, the Soviet Armed Forces not only defended

the honour and independence of their Motherland, but also fulfilled their world-historical liberation mission, rendering assistance to many peoples of Europe and Asia in their struggle for national and social liberation, for socialism.

A vivid example of the fulfilment of internationalist duty by the Soviet people was their assistance to a number of developing countries in recent years to prevent the export of imperialist counter-revolution. In 1957, for example, US aggression against Syria was prevented. In the following year the socialist countries did not allow intervention against Iraq. The Soviet Union played a decisive role in the defence of the Cuban Revolution in 1961-62.

The assistance of the Soviet Union to other peoples is in full conformity with the objective course of social development, the logic of class struggle in the international arena. Today the peoples fighting for their social liberation, entering the non-capitalist road of development, depend upon the support of their true friends — the Soviet Union and other socialist countries. It is with this noble mission of help, that a limited contingent of Soviet troops was sent to the Democratic Republic of Afghanistan at the request of its government, to help its people to repulse armed aggression. As is known, when the situation in the country began to normalise some of the Soviet troops were withdrawn from the country.

The sharpening of the international situation in the present period provoked by US imperialism and its NATO allies, and also Peking's hegemonists cannot change the policy of peace and friendship among peoples pursued by the Soviet Union. The Leninist foreign policy course of the Soviet country is unshakable. This course combines a consistent love of peace with a firm rebuff of the aggressor.

The Soviet Armed Forces were and remain a reliable guardian of their country. They safeguard the gains of socialism, serve as a bulwark of peace and the security of peoples. In his speech in Alma-Ata L. I. Brezhnev, General Secretary of the CPSU Central Committee, Chairman of the Presidium of the USSR Supreme Soviet, said: "Our valiant Armed Forces possess everything necessary to repulse any aggressor."

PARTY GUIDANCE — THE MAIN SOURCE OF THE ARMY'S STRENGTH

The Leninist Party is the organiser and inspirer of the victories of the Soviet Army and Navy. Its organising and directing role in strengthening the defence capacity of the country becomes apparent in the unity of political, economic and military leadership. Such a unity is conditioned by the very nature of socialist society, by the conscious and purposeful character of its construction, carried out on the basis of knowledge and use of the objective laws of social development. Strict coordination of the activity of the Party, state and military machinery with the leading and directing role of the CPSU made it possible at all stages of the history of the Soviet country to solve the assigned combat missions purposefully and operatively, to concentrate the political, economic and military efforts of the country on solving urgent problems concerning the defence of the Soviet state.

Thanks to the tireless care of the Party, the government and all the Soviet people, the army and navy have advanced very much in their development in comparison with the period of the last war. On the basis of effective realisation of the socio-economic possibilities and advantages of developed socialism, the material and technical base of the Armed Forces is being strengthened. Today the Soviet fighting men possess weapons and combat equipment which make it possible to solve successfully the complicated tasks of maintaining the army and navy in constant combat readiness.

The organisation and structure of the forces is being improved simultaneously with their technical equipment. The Soviet fighting men are also armed with the most advanced military science which has absorbed the brilliant experience of the victorious struggle to defend the Socialist Motherland.

The strength and combat might of the Soviet Army and Navy is multiplied by the fact that the weapons are handled by men educated by the Communist Party and the whole Soviet way of life in the spirit of loyalty to the Socialist Motherland and readiness to defend it. Nearly 100 per cent

of servicemen have higher or secondary general or incomplete secondary general education. Close on 50 per cent of the officer personnel are engineers or technicians. Almost all formation commanders, over 90 per cent of the regimental commanders, all commanding officers of ships of 1st and 2nd Rank, all chiefs of political bodies and four fifths of political workers in regiments are officers with higher education.

The Soviet servicemen strive to meet the 26th CPSU Congress befittingly. In anticipation of the Congress the Central Committee of the CPSU has worked out a draft programme "Guidelines for the Economic and Social Development of the USSR for 1981-85 and for the Period Ending in 1990" which inspires the servicemen of the Soviet Armed Forces to new accomplishments in combat training and political education. Implementation of the plans developed by the Party will ensure a further increase of the country's economic potential and the people's well-being and maintenance of the defence potential at the appropriate level, and will contribute to a growth of the Soviet state's international prestige and strengthening of the world socialist system.

A tireless struggle to raise the combat readiness of units and ships, further improvement of military skill and discipline, organisation and order are the best present which the Soviet servicemen are preparing for the 26th Congress of the Communist Party of the Soviet Union.

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ARMED FORCES

ON MORAL TRAINING OF SOLDIERS

Moscow SOVIET MILITARY REVIEW in English No 1, Jan 80 pp 28-29

[Article, under the heading "The Making of a Soldier", by Col I Konovalov: "Moral Education"]

[Text]

Advanced socialism is characterised not only by economic, social, political and cultural achievements, but also by the establishment of communist ethics which is an important indicator of the maturity of Soviet society.

Marxism-Leninism proceeds from the fact that only a socialist revolution which abolishes class and national oppression of people, only a radical transformation of all aspects of social existence can pave the way for man's freeing from the fetters of individualism, egoism and the private property mentality.

In the context of advanced socialism the main purpose of moral education is to make the standards of communist morals and ethics standards of behaviour of all citizens. Ethical practice, i.e. the transformation of moral standards into actions, is inseparable from labour, social work, everyday life, intercourse between people and from educational measures.

Ethical activity, a conscious attitude towards social duty, conscience, a highly developed sense of honour, dignity, and unity of word and deed are essential features of Soviet man which contribute to progress by the whole of Soviet society.

The Soviet Armed Forces carry out the moral education of the personnel in keeping with the Constitution of the USSR and the requirements of the Oath of Allegiance and the service regulations.

A serviceman's moral convictions, his notions of good and evil, honour and dignity are moulded on the basis of knowledge of the laws governing social development and profound assimilation of the scientific ideology of the working class—Marxism-Leninism. Under the influence of political education the ethical concepts of justice, humanism and collectivism develop into motives prompting the individual to engage in socially useful activity.

It is the task of moral education to develop in servicemen an active stand in life, a conscious attitude to social duty, with word and deed being inseparable in everyday behaviour. Our socialist reality, the atmosphere of every military collective and all forms of education help mould in the serviceman an active stand in life.

The specific character of moral education consists in the fact that it concentrates its effort on the behavioural aspect of man's activity, i.e. on the shaping of moral motives, internal stimuli, actions and deeds. In the context of military service moral education aims at helping to train a tank driver-mechanic, pilot or other serviceman who acts in strict

conformity with the requirements of the Oath of Allegiance, the regulations and rules of communist ethics. It is precisely such an approach that enables Soviet commanders and political workers to achieve high proficiency in combat training and political education and constantly to develop in the subordinates high moral qualities and virtues. In summing up the results of lessons, drills, shooting practice, exercises and cruises, commanders and political workers will not only analyse the men's proficiency level, but also note the ethical aspect. They will take into account the effort a man has put into the fulfillment of his duties. They will mention whether he has done his best, they will point to the motives he was guided by when he assisted his comrade, etc.

Moral education has developed methods of its own. Knowledge of ethics is imparted through lectures, talks and reports on morals and ethics, seminars, debates, readers' conferences devoted to discussing the moral aspect of contemporary man. Ideological influence and ethical enlightenment form an important element in the system of moral education which makes for profound knowledge of the rules and principles of communist ethics, the value of ethical behaviour in keeping with the basic interests of the individual. Commanders and political workers will make use of the entire range of methods of ideological work to promote communist ethical standards.

Military ceremonies have a tremendous impact on the men's feelings. The presentation of the unit Colours, drill parades, presentation of awards, rendering of military honours prompt the servicemen to devote special thought to such moral categories as honour, duty and conscience.

Theoretical substantiation of the communist ethical standards helps the men master the knowledge of ethics. To this end it is also important to explain to the men the moral and ethical aspect of phenomena and relations that people encounter in everyday life. Diligence, discipline, collectivism, comradely mutual assistance, honesty and modesty are features that are widespread among Soviet people. In the context of Soviet reality they help popularise the humane character of the ethics of socialist society and the motive force behind it.

Ethics manifests itself in the way a serviceman executes his official, social and political duties. In his work in pursuit of tasks arising from the sense of military duty, ethical relations are reflected in a man's moral qualities. These relations are varied in content. They are manifested in a man's attitude towards socialist society and to the social

processes occurring in his country and outside it, to service in the armed forces, to his collective, to himself, his behaviour and shortcomings.

The moulding of moral qualities determining a man's attitude towards socialist society is naturally of primary importance, because these qualities harmoniously combine the interests of the individual with those of society. This is one of the greatest achievements of socialism. The Soviet man does not divorce himself from the state, he regards the interests of the state, the national interests, as his own.

Realisation that the interests of the individual and those of the state are basically the same is a vital psychological precondition for cultivating in the man love for the Homeland, a sense of pride in their people and a desire actively to defend these interests.

The ethical maturity of a serviceman is largely determined by his attitude towards the fulfilment of service duties. Combat training and political education help develop in the man a lofty sense of responsibility. V. I. Lenin pointed out that "the more profound the change we wish to bring about, the more must we rouse an interest and an intelligent attitude towards it..."

A man's responsible attitude towards his official duties is moulded in everyday practical activity. Once it has been formed it grows over into an inherent feature and manifests itself in such ethical qualities as a sense of duty, honour and conscience, to which it imparts a socially meaningful content.

When men fulfil their official duties, attend lessons and perform drills they are often confronted with difficult moral problems, having to choose between the requirements of duty and personal convenience, between principledness and friendly relations with fellow-servicemen, between the interests of the collective and their personal interests. Every choice leaves an imprint on the moulding of moral convictions and confirms the man's faith in the soundness of Soviet society's moral principles.

Though there are many forms, methods and means of moral education, the decisive element in it is man's influence on man. It takes a personality to form a personality. In emphasising the complex character of the mechanism of education V. I. Lenin wrote:

"A living example is more effective than any proclamations and conferences..."

Generally speaking moral education is not based merely on the requirements of society as expressed in moral standards, but rather on concrete models in which they are most fully embodied.

Leaders and educators have to meet special requirements with respect to personal irreproachable behaviour. They have been entrusted with the guidance of military collectives. Therefore, their subordinates keenly appraise their personal behaviour in every concrete situation. It is most important for a leader (commander) to carry out his official duties impeccably, to observe ethical standards meticulously, to be exacting to himself, to be honest in relations with his superiors and subordinates and in everyday life, because his conduct is not merely a criterion of his personal merits, it is also a criterion of the authenticity of

the moral values he embodies. That is why a socialist army presents such high requirements to its executive personnel in this respect.

The actions and behaviour of a serviceman also largely depend on his appraisal of his personal potentialities and qualities. If he overestimates his personal abilities and qualities, he will think that his superiors are unfair to him, even if their assessment of his service performance is just. If he underestimates his abilities and qualities, he will constantly lack confidence in his potentialities. He will be hesitant even when he is assigned missions he is able to cope with. Such a serviceman will often fail to utilise his potentialities to the full and to achieve the results he could achieve. Underestimation of one's abilities often leads to unsociability and self-isolation. That is why in the process of moral education the commanders and political workers will not only take into account a man's strong and weak points, but also his attitude towards his qualities and shortcomings.

Men who overestimate their qualities call for special attention. Setbacks are painful to them, especially setbacks in service. At the same time they are inclined to ignore their shortcomings. They try to conceal their weaknesses not only from others, but even from themselves.

There are various ways to help a man to overcome his moral troubles arising from overestimation of his abilities. They are all purely individual. The question has to be solved along two lines: the serviceman himself must improve his service performance to meet objective requirements or lower his self-estimation to the level of his actual abilities. It is possible to work on both lines simultaneously, i.e. improve service performance and to lower self-estimation.

Moral and material incentives, if correctly combined, enhance the effect of moral education. If the recompenses, awards and commendations a man receives fully correspond to his efforts and merits, to the results he has achieved, their educational effect will be high. In the army and navy commanders and political workers can make use of a wide range of methods and means to encourage the efforts of officers and men who have secured excellent results in combat training and political education. Whenever a man displays marked diligence, this becomes a major event in the ethical life of the entire military collective. Public recognition of a man's achievements brings him tremendous moral satisfaction, it promotes his self-education, emphasises the social value of his effort in performance of military duty.

The entire organisation of life, service duties and everyday life in keeping with regulation requirements contributes considerably to forming habits and accumulating experience in ethical behaviour. Strict order, efficient organisation, healthy relations between the servicemen and high requirements leave their imprint on the work and behaviour of servicemen, on the development of such qualities as purposefulness, operativeness and persistence.

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CSO: 1812

ARMED FORCES

WARTIME OPERATIONS: VISTULA-ODER OPERATION

MOSCOW SOVIET MILITARY REVIEW in English No 1, Jan 80 pp 38-41

[Article by Col (res) L. Kozlov, cand sci (History): "From the Vistula to the Oder"]

[Text]

Thirty-five years ago, on January 12, 1945, began the Vistula-Oder operation — one of the Soviet Army's biggest strategic operations during the Second World War.

Early in 1945 the Soviet Army had cleared the territory of the USSR of the Nazi invaders except for the northwestern part of the Soviet Latvia, where nearly 33 enemy divisions were pressed to the Baltic Sea. The historical task confronting the Soviet Armed Forces was to complete the liberation of the countries of Central and South-Eastern Europe and, jointly with the allies in the Anti-Hitler Coalition, to force Nazi Germany to unconditional surrender.

The Soviet forces were preparing for decisive battles. According to the plan of the Supreme Command GHQ it was envisaged to mount an offensive in January on an enormous frontage from the Baltic Sea to the Danube. The main blow was to be delivered in the Warsaw-Berlin direction. By that time the Anglo-American forces on the Western front found themselves in a difficult situation as a result of the breakthrough of their defences by the Hitlerites in the Ardennes. Winston Churchill, the Prime Minister of Great Britain, requested the Soviet Government for help. True to its allied obligations the Supreme Command GHQ, despite the incomplete readiness of the forces, decided to start the Vistula-Oder operation not on January 20, as had been planned, but on January 12.

The Vistula-Oder operation was carried out by the forces of the 1st Byelorussian Front under Marshal of the Soviet Union G. K. Zhukov and of the 1st Ukrainian Front under Marshal of the Soviet Union I. S. Konev, which in the course of the powerful summer offensive of 1944 had reached the Vistula and captured a number of bridgeheads on its left bank. The task confronting them was to defeat the Nazi Army Group "A," to complete the liberation of Poland and to create favourable conditions for a decisive blow at Berlin. These fronts were supported by the forces of the 2nd Byelorussian Front's left wing and the 4th Ukrainian Front's right wing.

The Nazi Command did all it could to prevent the Soviet forces from reaching the approaches of the German capital. On a five-hundred kilometre space between the Vistula and Oder it created a powerful, deeply echeloned defence consisting of seven lines saturated with fortified engineer constructions. It was here that the main forces of Army Group "A" (from January 26, 1945 — "Centre"), numbering up to 560,000 officers and men, nearly 5,000 guns and mortars, more than 1,200 tanks and assault guns, over 600 combat planes were operating.

The Soviet Command prepared a blow of colossal power. At the beginning of the operation the 1st Byelorussian and the 1st Ukrainian fronts comprised 2,200,000 men, 33,500 guns and mortars, 7,000 tanks and self-propelled guns and 5,000 aircraft.

The concept of the operation provided for simultaneous cutting blows at the enemy in the Poznan and Breslau directions, dispersing and destroying his isolated groupings piecemeal. Particular attention was paid to achieving a high rate of advance. The Soviet mobile forces were to forestall the enemy reserves and his withdrawing forces in capturing the intermediate defensive lines.

The 1st Byelorussian Front delivered a blow from the Magnuszew bridgehead in the general direction of Poznan. The second blow was struck from the Puławy bridgehead in the general direction of Radom and Łódź. Part of the front's forces launched an attack from the area north of Warsaw. Here on the request of the Provisional Government of Poland the 1st Army of Wojsko Polskie (organically assigned to the 1st Byelorussian Front) was to take part in the liberation of Warsaw.

The 1st Ukrainian Front struck a single powerful blow from the Sandomierz bridgehead in the Radom-Breslau direction.

The operational formation of the fronts and armies and the battle formations of groupings and units were deep. In the directions of the main blows a superiority over the enemy in manpower and equipment was created. Over 75 per cent of the combined-arms and 90 per cent of the tank and mechanised formations and major groupings were concentrated there. The density of the artillery in the breakthrough sectors was 230-250 guns and mortars per kilometre of frontage.

Marshal of the Soviet Union I. S. Koniev received: "We had envisaged such a formation of the strike grouping that our initial blow would be of maximum force and would ensure a rapid breakthrough of the enemy defences already on the first day. In other words, we wanted to open the doors wide to let our tank armies through."

There were also a number of peculiarities in the use of artillery. The artillery bombardment preparatory to the attack of the advanced battalions (reconnaissance in force) was carried out in the form of fire raids. Besides, on the 1st Byelorussian Front their attack was supported by a single barrage fire. This was something new in the military art. The Command planned to carry out a double barrage fire to a depth of 2.5-3 km to support the advance of the front's main forces. The

artillery support of the commitment to battle of the mobile groups was entrusted to the combined-arms armies.

A great number of tanks were detailed for direct support of the infantry. The direct support tanks were attached to infantry battalions and even companies and platoons, for joint action throughout the entire depth of the breakthrough.

The Air Force directed its main effort at supporting the front's strike groupings: in the beginning — the combined-arms armies, and in pressing home the attack — the army and front mobile groups. Formations of attack, bomber and fighter planes were attached to the combined-arms armies and front mobile groups.

The preparation for the operation proceeded in profound secrecy. Only a limited number of persons participated in its elaboration, the main method of leadership of the forces was personal contact. A reconnaissance in force was carried out on a wide frontage not one day before the beginning, as had been the case in a number of preceding operations, but on the day of the offensive of the main forces.

Military councils, political bodies, commanders and political workers conducted strenuous Party-political work among the personnel. They called on the officers and men to fulfil their internationalist duty, to help the fraternal Polish people in the final liberation of the country from the Nazi invaders. Great attention was paid to developing in the fighting men an offensive spirit and the striving to act courageously, stubbornly and with initiative in battle. Prior to the offensive Party and YCL meetings were held in units and subunits and at them Communists and Komsomol members expressed their determination to be the first in battle.

On January 12, the striking group of the 1st Ukrainian Front dealt a powerful blow from the Sandomierz bridgehead.

During the first day of the operation the Soviet forces broke through the main line of the enemy defence and advanced 15-20 km and broadened the breakthrough sector up to 35 km. The offensive continued even during the night.

At a depth of 5-6 km mobile formations and major formations of the front were committed to action. Overcoming or bypassing enemy centres of resistance they rushed forward. Enemy attempts to withdraw to prepared defence positions and to consolidate on them failed. The actions of the 3rd Guards Tank Army commanded by P. Rybalko were particularly successful. By the morning of January 13, its formations had overcome the second enemy defence line, reached the Nida River and crossed it on the move.

Having successfully repulsed isolated counter-blows of the enemy reserve the Soviet forces captured the town of Kielce on January 15. In a day the tankmen of General P. Rybalko together with the fighting men of the 5th Guards Army under General A. Zhadov and of the 52nd Army under General K. Koroteyev crossed the Warta and captured the town of Czestochowa. By that time other formations of the front had reached Cracow.

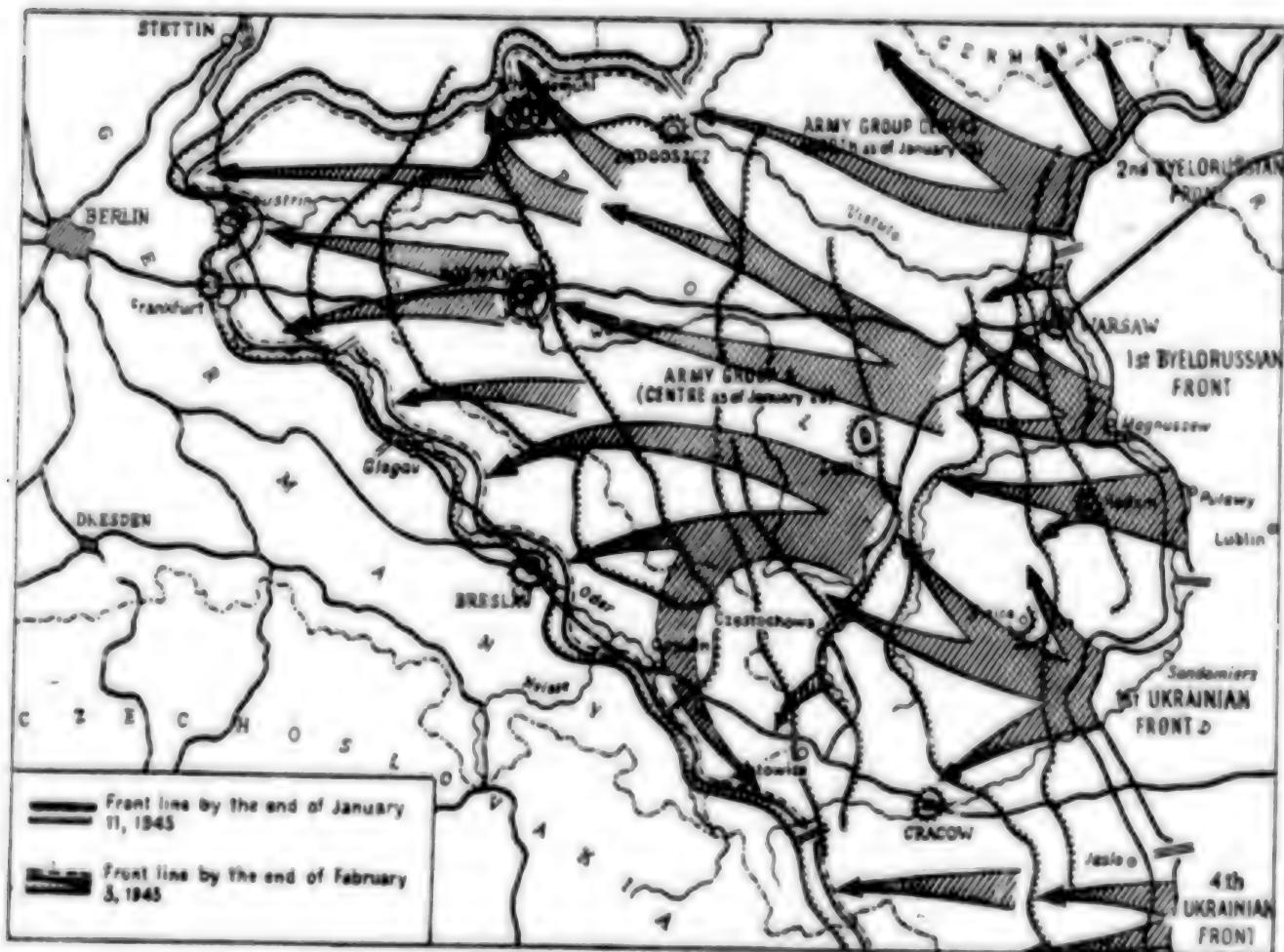
In six days of severe fightings the forces of the 1st Ukrainian Front drove a wedge up to 160 km deep into the enemy defences, crushing them on a 250-kilometre frontage.

The offensive of the 1st Byelorussian Front launched on January 14, developed successfully too. During the day its forces broke through the main and in some places the second defence zone. On January 15, General M. Katukov's 1st Guards Tank Army and the next day General

S. Bogdanov's 2nd Guards Tank Army were committed to action. The tankmen rapidly advanced into the depth of the enemy defences in the direction of Lodz and Sochaczew.

By the end of January 15, the enemy's Vistula defence line was broken through to a depth of several dozen kilometres. The offensive from the two bridgeheads merged into one crushing blow. The front's mobile formations reached the operational range and rushed towards Poznan.

That same day the 47th Army under General F. Perkhorovich and the 61st Army under General P. Belov mounted an offensive bypassing Warsaw on the north and south. General S. Bogdanov's tanks struck at the enemy Warsaw group from the rear. On January 17, the Soviet troops jointly with their brothers-in-arms — officers and men of the 1st Army of the Wojsko Polskie, who had assumed the offensive in the night of January 16-17 liberated Warsaw, the Polish capital, from the nazi invaders.



In the first stage of the operation up to the end of January 17, the Soviet forces broke through the enemy Vistula defence line in a zone 500 km in frontage and up to 150 km in depth. The main forces of Army Group "A" (Centre) suffered a crushing defeat.

The offensive of the neighbouring major formations: the 2nd Byelorussian Front — in Eastern Prussia, and the 4th Ukrainian Front — in the South of Poland contributed to the success of the 1st Byelorussian and the 1st Ukrainian fronts.

After the rout of the Hitlerites on the Vistula, the Supreme Command GHQ insisted on Marshals of the Soviet Union G. K. Zhukov and I. S. Konev speeding up the advance to the Oder. The troops started a swift pursuit of the enemy which went on by day and by night. It was carried out by strong advance detachments, formed in the armies, corps and divisions. The Nazi Command, in an effort to restore its disorganised defences, transferred some forty divisions from the Western front, Germany and other sectors of the Soviet-German front in the course of the operation. But all enemy attempts to stop the advance of the Soviet forces to the Oder failed. On February 3, the forces of the 1st Byelorussian Front in its zone cleared of the enemy the right bank of the Oder, crossed the river on the move and captured a bridgehead on the left bank in the area of Küstrin. Now the Soviet forces were only 60 km from Berlin.

At the concluding stage of the operation, a gap having been formed between the forces of the 1st and 2nd Byelorussian fronts, Marshal of the Soviet Union G. K. Zhukov detailed strong forces to the front's right wing to cover its main grouping against a possible enemy blow from Eastern Pomerania.

At that time the forces of the 1st Ukrainian Front were advancing in the Breslau direction. They crossed the Oder in several places and captured bridgeheads in the area of Breslau and south of Oppeln. On the instructions of the Supreme Command GHQ the front commander paid special attention to the speedy liberation of the Silesian industrial area. This was of paramount

significance for the economic development of people's Poland. In order to avoid its destruction the Soviet Command carried out an enveloping manoeuvre with the forces of the 3rd Guards Tank Army and the 1st Guards Cavalry Corps. Fearing encirclement the enemy hastily abandoned the Silesian industrial area.

Having defeated the Nazi Army Group "A" (Centre), reached the Oder on a wide frontage and captured a number of bridgeheads on its western bank the forces of the 1st Byelorussian and 1st Ukrainian fronts had completely fulfilled the assigned mission and on February 3, completed the Vistula-Oder operation. By its results it had a great political and military significance. The Soviet forces had liberated almost the whole of Poland. "The Polish people," said a telegram from the Polish government to the Soviet Supreme Command on January 20, 1945, "will never forget that it got freedom and the possibility to restore its independent state activity as a result of the victories of Soviet arms and thanks to the blood abundantly shed by the heroic Soviet fighting men."

The Soviet Army inflicted a heavy defeat on the Nazi Wehrmacht and entered the central regions of Germany.

During the operation the Soviet forces defeated 25 and destroyed 35 Nazi divisions. Over 147,000 officers and men were taken prisoner.

The Soviet Command had demonstrated a high level of military art. The method of routing the enemy by deep, cutting blows used by the Supreme Command GHQ was most effective and expedient in the given situation.

In the course of the operation the Soviet generals, officers and soldiers demonstrated increased combat skill, mastery and high moral and political qualities, displayed mass heroism. Hundreds of thousands of them were awarded Orders and medals. Hundreds of formations and units were granted honourable titles and awarded combat decorations. Many times Moscow fired artillery salvos in honour of the heroes of the grandiose Vistula-Oder operation.

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ARMED FORCES

COMMANDER TURKESTAN MD ON TECHNICAL TRAINING

Moscow SOVIET MILITARY REVIEW in English No 1, Jan 80 pp 10-12

[Article by Col Gen Yu. Maksimov, commander of the Turkestan Military District: "Raising Technical Training Level"]

(Text) The Turkestan Military District was organised in May 1918. The district has accumulated a wealth of experience in the training and education of personnel. It has created many good traditions in competent maintenance and employment of military equipment.

In 1968 the Presidium of the USSR Supreme Soviet awarded the Turkestan Military District the Order of the Red Banner for its outstanding contribution to the defence capacity of the Soviet state and achievements in combat training and political education.

The present issue publishes material on the combat training and life in the district.

Rapid scientific and technological progress has been exercising a serious influence on the development of the Armed Forces, their equipment, organisation, methods of warfare, training and education of personnel.

The qualitative changes that have occurred in armaments and technical equipment have sharply altered the man-equipment relationship. They have affected the character of military labour and the distribution of functions between man and military equipment. The introduction of control instruments and mechanisms, electricity, automatic and automated systems has helped relieve man of certain operations. Extensive use of various technical means, including electronic computers for collecting, processing, storing and retrieving information, and also for quick and accurate calculation improves the efficiency of commanders and staffs. The employment of scientific and technical achievements in troop control enables the commander to adopt the most suitable decisions in much less time.

The operation and maintenance of elaborate machines, weaponry and apparatus call for profound professional knowledge. Though the degree of an army's "technisation" may increase greatly, the decisive factor in war will always be "the man behind the weapon," the man who has mastered

the weapon and other equipment to a high degree of perfection. The greater the power of the weapon, the bigger the role played by the man. Very often a most advanced weapon will not ensure superiority in battle, if it is in the hands of inadequately trained men or men whose morale is not up to the mark.

The change in the man-military equipment system has enhanced the personal responsibility of the serviceman for mastering not only his main, but also related specialities. Today a specialist will often have to perform functions that used to be executed by several men.

Speaking of a serviceman's personal proficiency it is also important to bear in mind that the forces are being increasingly provided with crew-served weapons. This means that it is important to develop team-work in crews and action stations and high moral and combat qualities in the men.

The introduction of more sophisticated weaponry and combat equipment has made it necessary to increase the number of technicians in all the fighting services and arms. The problem of raising the level of technical training is therefore one of key importance in the entire system of combat training. Combat readiness cannot be considered as assured, unless the men are capable of

maintaining their weapons and other combat equipment in constant standby condition.

Weaponry and equipment are not merely fighting instruments. They are the material requisite for high combat efficiency of the forces. Modern combat is extremely dynamic, full of acute and unexpected, tense moments. Only men who have thoroughly mastered the combat equipment, make competent use of it in battle, are physically fit, possess a high morale and have been politically and psychologically stealed will secure victory in battle. High technical proficiency and excellent mastery of fire weapons are now a key indicator of combat readiness of the forces.

The Turkestan Military District pays special attention to the technical side in all combat training and political education. Success largely depends on the methods the commanders use to instil skills in the handling of weapons and other equipment.

The district makes use of the following methods of instruction.

Oral presentation of the material is normally combined with demonstration of weapons and other combat equipment, and various visual aids such as mockup models, diagrams, tables and placards. Talks are held on the subject in order to deepen, consolidate or check the men's knowledge. They often consist of questions and answers.

Drills form a vital element in the moulding of practical skills. They teach the men to apply their knowledge in practice. Hence they are regarded as one of the chief methods in the acquisition of military skill and proficiency. It is by constant repetition of actions in conditions approximating those of actual combat as much as possible that men develop such qualities as quick thinking, professional memory, keenness of observation, quick response, self-control, staying power, daring, resolve and courage.

Practical work is intended to consolidate the knowledge assimilated and improve individual proficiency. As a rule, it is conducted on a sub-unit basis and therefore plays a big role in welding the personnel together. During tactical lessons and exercises (especially with field firing), firing and launching of missiles, execution of maintenance and scheduled operations, inspection of vehicles and related equipment and during practical lessons in various subjects which are conducted in the field, the commanders improve the men's skills, deepen their technical knowledge, check the level of their readiness to perform their functions in conditions close to actual combat.

As far as the forms of training are concerned it should be mentioned that they are determined by the tasks and content of individual and sub-unit training, and by the specific character of their functions in combat. The main form of instruction are lessons covering theory; field exercises which help maintain practical skills at an adequate level and further improve them; tactical, special tactical and other exercises intended to raise the men's field training standard and to achieve unit team-work; park servicing and scheduled maintenance days also play a big role in improving technical level. They are used to study the design and functioning principles of various mechanisms and elements and their operation and maintenance. There are also other forms of instruction which are being constantly improved with the rising general educational level of the personnel and the increased volume of knowledge required to ensure combat proficiency.

In the classroom the instructor normally resorts to oral presentation of material. At practical lessons the men carry out drills and work with weapons and equipment.

Training and improvement of combat proficiency is a continuous process. Such is the dialectic governing the development of military science. One of the chief tasks we are pursuing is constant search for effective methods, improvement of methods of mastering weapons and other combat equipment and for their efficient use.

Units have organised many complex teams of rationalisers and inventors that have developed various trainers and training devices. The military district has introduced dozens of rationalisation proposals for improving field training facilities.

Most of the units in the district have set up young Inventor schools. They play a big role in raising the effectiveness of rationalisation proposals and in drawing personnel into work in technical creativity.

The district attaches special importance to spreading military and technical knowledge among the personnel. Its main purpose is to ensure excellent mastery of weapons and other combat equipment, to develop the men's interest in general scientific, military and technical knowledge, to give them a sense of pride in their fighting service and arm, to promote rationalisation and invention, to find ways of reducing the time needed to bring the weapons and other equipment into standby condition, to spread advanced experience and the achievements of the best specialists.

Units widely practise such forms of work as military-technical, gunnery-small arms, flying and methods conferences, technical circles and lectures. Technical information bulletins, leaflets and visual aids greatly contribute to spreading military and technical knowledge.

The military district has developed a streamlined system for spreading military and technical knowledge. It covers all categories of servicemen and is directed by commanders, staffs, political bodies, Party and VCL organisations.

The level of combat training and political education in units largely depends on the personal competence of the officers and non-commissioned officers in their special fields and methods, their skill in formulating concrete missions at the right time, their thoroughness in preparing, organising and conducting lessons, their ability to make a fair appraisal of the knowledge of their men, to detect and remove shortcomings.

Training period to work up performance standards promotes quick mastery of combat equipment, helps reduce the time needed for bringing it into standby condition, improves the quality of

combat training and gives concrete forms to the socialist emulation movement.

For socialist emulation to be effective it must above all be organised properly and constantly directed. Every subunit should be given a concrete task: to acquire certain knowledge and skills by such and such a date, to train so many men with excellent results in combat training and political education to their credit, so many rated specialists, so many athletes with an official sports rating, etc. Unit commanders and their staffs should personally control the fulfilment of pledges.

Regular summing up of results and fair appraisal of the men's knowledge are a powerful incentive in improving performance in combat training and fulfilment of individual socialist pledges.

The officers and men of the Order of the Red Banner Turkestan Military District work perseveringly to master modern sophisticated weapons and equipment, constantly raise the level of combat readiness and vigilantly guard the security of the southern frontiers of the Soviet state.

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AIR FORCES

GROUND ATTACK TRAINING

Moscow SOVIET MILITARY REVIEW in English No 1, Jan 80 pp 24-25

[Article, under the heading "Combat Training", by Maj V. Dovgalenok (Dovgalyonok)
Military pilot 1st class: "Hitting Ground Targets"]

(Text)

WHEN the enemy has strong antiaircraft defences it is most advantageous to attack ground targets without a preliminary manoeuvre from a low altitude, since then the aircraft will be over the target for the shortest possible time.

A low altitude attack presents considerable difficulties for the pilot, and has a number of peculiarities. Flying procedure and ground target detection are greatly hindered, for high flying speeds lead to considerable angular displacement of ground objects, thus reducing the time available for identifying them. Besides, the range at which targets, particularly pinpoint ones, can be detected, decreases. For example, from an altitude of 1,000 m pinpoint targets can be detected at a distance of 4-5 km, but from 50-100 m at a range of no more than 1.5-2 km.

When searching for ground targets the pilot, as a rule, observes a sector of terrain at 30-40° to the right and left of the aircraft axis. It should be borne in mind that the terrain in front of the aircraft is cut off by the fuselage at an angle of 10° on both sides of the aircraft axis. The size of this sector depends on the flight altitude. For instance, from an altitude of 100 m the pilot

cannot see terrain closer than 600 m in front of the airplane. Pinpoint target detection range at this altitude being 1.5-2 km (as mentioned above), at a speed of 900 km/h the pilot will have only 3-6 seconds to identify the target, which is quite insufficient to identify the target and make a corrective turn to attack it.

Moreover, even if the pilot detects the target at a sufficient range to identify it and makes a corrective turn, the attack will be possible only from a chandelle, which also involves certain difficulties. To succeed in such an attack the pilot must fly past the target at a distance equal to twice the radius of a 180° turn. While performing the manoeuvre the pilot will not see the target until he has turned 90-120°. He will have to repeat the search in order to put the plane into a dive at the preset dive angle calculated for the corresponding speed and altitude. Besides, such a manoeuvre reduces the surprise element.

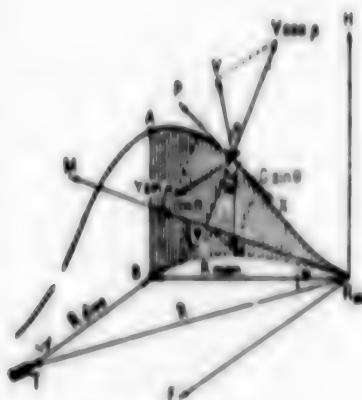
During combat operations pilots often have to hit previously reconnoitred targets which are not likely to change their location for a certain time. One of the most efficient methods of hitting such targets

without a preliminary manoeuvre is to attack from a straight line after a hump.

Unlike other kinds of attack, e.g. diving or level attack, this version is characterised by the aircraft having to climb from a definite reference pt. (let us call it the main reference point) which is generally chosen not strictly on the bearing line from the terminal bearing point, but offset from it by 4-6 km.

Before flight the pilot studies the terrain, marks on the map the exact location of the target or the area where it is likely to be located. At a distance of 6-10 km from the target he designates the main reference point which can be detected and identified in flight at maximum range. Then, in accordance with the assigned variant of fire action (bombing, missile or gun firing, etc.), he determines the parameters of the manoeuvre and of the attack proper, e.g. the altitude and speed required to put the aircraft into a dive, the diving angle and also the range for releasing bombs or opening fire.

The target approach direction is chosen so that the plane will fly past the main reference point on a course differing from the combat course by 60-70 degrees. The search sector is thus narrowed and the pilot knows beforehand on which side of the flight route the target is. As soon as the aircraft flies past the main reference point the pilot begins to perform a vertical manoeuvre to climb to the altitude necessary to enter into a dive in compliance with the preset attack variant. Simultaneously, he turns the plane towards the target, which he tries to detect during the manoeuvre. The increasing altitude facilitates visual search. The pilot chooses the climb angle which permits him to detect and identify the target when the aircraft climbs to 1,400-1,600 m. Then the aircraft is placed on the combat course and made to descend without levelling out. Target approach is corrected by rolling in or out.



A - dive initial point
 R_0 - main reference point
 T - target

If the pilot is not energetic enough in beginning the manoeuvre to approach the point at which he goes into a dive, he will have to bank deeper in the end of the manoeuvre, and the plane will be upside down. In that case the pilot will have to pull the control stick to make the aircraft go into a negative dive. In this position the pilot will find it very difficult to make a turn and take correct aim.

The experience of the first flights to work up ground target attacks by the methods just described has shown that without thorough preliminary calculations pilots make serious mistakes in approaching the initial diving point.

By way of example let us determine the parameters of the manoeuvre to approach the point of going into a dive and the position of the main reference point for the following conditions: airspeed — 800 km/h; climb angle during the manoeuvre — 20 degrees; turn angle during the manoeuvre — 60 degrees; g-load during the manoeuvre — 1.7; diving angle — 20 degrees; initial manoeuvre altitude — 100 m. Substituting these values in the formulas (1-6) we shall obtain: the time of turning for the combat course, 16 sec; range from the beginning of the manoeuvre to the dive entry point, 3.1 km; range from the beginning of the manoeuvre to the target,

$$t = \frac{V \cos \theta}{580 \sqrt{L - \cos^2 \theta}} \cdot \Psi \text{ (80)}, \quad (1)$$

$$\Delta h = \frac{V^2}{1120} \cdot \frac{\sin 2\theta}{\sqrt{L^2 - \cos^2 \theta}} \cdot \Psi, \quad (2)$$

$$R_{\text{man}} = \frac{V^2}{2} \cdot \frac{\cos^2 \theta}{\sqrt{L^2 - \cos^2 \theta}} \cdot 2 \sin \frac{\Psi}{2}, \quad (3)$$

$$R = R_{\text{div}} \cdot \frac{\sin \frac{\Psi}{2}}{\sin \frac{R_{\text{div}}}{R_{\text{man}} - R_{\text{div}}} \cdot \frac{\Psi}{2}}, \quad (4)$$

$$\Psi = \frac{\Psi}{2} \left(1 + \frac{R_{\text{div}}}{R_{\text{div}} + R_{\text{man}}} \right), \quad (5)$$

$$R_{\text{div}} = H_{\text{div}} \cdot \operatorname{ctg} \Psi \quad (6)$$

V - speed

L - time of turn for a given angle

L - load factors

θ - climb angle

Ψ - corrective turn angle

Δh - change of altitude during the manoeuvre

R, R_{div}, R_{man} - ranges

g - acceleration of gravity

φ - target azimuth

H_{div}-div initial altitude

λ - dive angle

6.5 km; change of altitude during the manoeuvre, 1,200 m; dive entry altitude, 1,300 m; target bearing, 45 degrees; distance from the dive entry point to the target, 3.6 km.

The calculations thus show that air-to-ground attack from a vertical manoeuvre under the given conditions requires that the main reference point should be chosen at a distance of 6.5 km from the target so that the latter is on the azimuth of 45 degrees.

The above manoeuvre has a number of advantages, the main being that target search from the main reference point begins immediately upon transition to climb, while thoroughly maintaining the assigned and calculated data of the manoeuvre enables the pilot to approach the initial point of the dive and detect the target during the attack without even seeing it.

To ensure that the attacking crews effectively penetrate the air defences, the strike group includes support aircraft. On the boundary of the launching or firing area the supporting crews divert the attention of antiaircraft guided missile system crews. At the same time the strike group approaches the target. The diversion group can also make deliberate raids into the scanned area together with the strike group and from the same direction. The aircraft illumination moment is determined with the aid of special instruments. Success of such tactical manoeuvres depends largely on the groups' teamwork in time and place. Failure to cooperate during the diversion manoeuvre may inform the enemy of the appearance of the strike group, thereby facilitating its destruction.

Antiflak manoeuvre of a pair of aircraft may be performed in a beam flight with alternate overtaking. Following the attack each pilot quickly leaves the target area to avoid a rectilinear climb.

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AIR FORCES

REVIEW OF YAKOVLEV MEMOIRS

Moscow SOVIET MILITARY REVIEW in English No 1, Jan 80 pp 57-58

[Book Review by Lt Col V. Aidarov of A.S. Yakovlev's "Notes of an Aircraft Designer": "The Joy of Creation"]

[Text]

"My life provides convincing evidence of the possibilities the Party gives every Soviet citizen, young people especially, provided they have the desire and will to work for the aims they have set themselves."

Alexander YAKOVLEV

The science of aviation is continually progressing. Designers are producing more and more aircraft models. New materials for aircraft engineering are being produced. The uses of aircraft are increasing. All this is the result of the painstaking and selfless efforts of many people, including scientists, designers, test pilots, technicians and workers.

The book "Notes of an Aircraft Designer" by Colonel-General Engineer Alexander Yakovlev, general designer, Member of the USSR Academy of Sciences, Lenin Prize winner and winner of six State Prizes, twice Hero of Socialist Labour, describes their work, daring ventures, uninterrupted creative quest, meetings with interesting people, and the author's work and life.

Alexander Yakovlev's career as designer started at the age of 12. Having read a book about the famous Russian eighteenth-century inventor Ivan Kulibin, the boy decided to develop a perpetual motion mechanism. Of course, this proved a complete failure. Then he read another book which gave a description and diagram of a model glider,

and aircraft model construction became his hobby. After completing secondary school he became a glider enthusiast. He built gliders and learned to fly them. He worked as a helper in a cabinet-maker's shop, and then as a motor mechanic at the central airfield in Moscow. He spent all his spare time designing sports planes.

In 1927 Yakovlev entered the N. Ye. Zhukovsky Air Force Academy. This is what he writes about this period of his life:

"I am not at all sorry for the four years I 'wasted' in a workshop and at the airfield, years that delayed my entry into a higher educational establishment. I acquired experience of work in a collective. When I became an engineer I was able not only to design an element, but also to make it on a bench or machine tool. I knew how it would behave in an aircraft. I believe that every engineer should go through a school of this kind in his special field..."

Upon graduation from the academy A. Yakovlev was sent as an engineer to one of the aircraft works. Here the administration

allowed him to organise a "light aviation group" and even gave him premises for it. It was here that the UT-1 and UT-2 trainers were built. They were both turned out in large series. Thousands of pilots learned to fly on them.

Even his early aircraft had distinguishing features of their own. The young designer managed to find the most advantageous weight ratios. He succeeded in ensuring a clean finish to the aircraft he produced. That was why Yakovlev's aircraft of that period were, as a rule, 50-100 kilogrammes lighter than other planes powered by the same engines and yet had a longer range and higher speed.

In summer 1939 J. V. Stalin, General Secretary of the Party Central Committee, summoned Yakovlev and proposed that he think of developing a fighter plane armed with a cannon. Other aircraft designers were assigned similar tasks. Later Stalin repeatedly summoned Yakovlev for consultation. These bearing on aviation. At the same time he displayed interest in work on the new fighter plane. On November 11, 1940, Yakovlev was appointed

* A. S. Yakovlev, "Notes of an Aircraft Designer," Moscow, Political Literature Publishers, 1979, 302 pp. (in Russian).

Deputy People's Commissar for Aviation Industry for Experimental Aircraft Engineering and Science.

In 1940 and the first half of 1941 the Soviet aircraft industry built and tested the LaGG-3, Yak-1 and Yak-7 fighters, the Il-2 attack aircraft, Il-4 and Pe-2 bombers.

From the technological standpoint the Yak-1 was very simple. It had a wooden wing, welded tube fuselage frame and duraluminium tail plane. Like all other Yakovlev planes it was characterised by a small weight and well thought out clean lines. It was powered by a water-cooled engine designed by V. Ya. Klimov. The engine was small in size and specific weight. When boosted the engine output reached 1,240 h. p. — which was impressive for those days. At a height of 3,400 m the plane developed a speed of up to 600 km/h. Its armament included a 20 mm cannon and two 7.62 mm machine guns. The industry turned out a total of 8,721 Yak-1 planes. The Yak-1 was superior in characteristics to the German M-109s and M-109Es.

Yakovlev writes that during the Second World War aircraft designers in the belligerent countries made persistent efforts to improve the combat characteristics of aircraft. In this battle of science and technology the Soviet Union emerged victorious. In the Battle of Moscow in 1941 the Hitlerites learned by bitter experience that the new Soviet fighters were superior to the German ones in their fighting qualities.

During the Battle of Stalingrad the Nazis introduced modified versions of the Me-109 — the Me-109F, Me-109G, Me-109G2 and the FW-190. But these aircraft too were inferior to Soviet planes, because the design improvements had increased their weight. The author points out that a larger number of machine guns, extra fuel to increase the range and boost speed caused the German aircraft "to suffer from overweight." As a result, their performance deteriorated. At the same time the appearance of these machines compelled the Soviet designers to search for ways to increase the speed of Soviet aircraft, to improve their manoeuvrability and to give them greater fire power. But the problem was to achieve these improvements without increasing the flying weight of the aircraft.

Yakovlev's design bureau carefully reconsidered the weight of the Yak-1 plane. It was decided to decrease the wing area from 17.5 to 14.5 sq. m and to replace the wooden spars with lighter duraluminium ones. The plane's aerodynamics were improved. Its lines were even cleaner. The oil radiator was housed in the wing, the water radiator was sunk into the fuselage. The tail wheel was made retractile in flight.

As a result of persistent effort new fighter — the Yak-3 — was produced. Powered by the same engine as the Yak-1 it had a maximum speed of 650 km/h and more powerful armament — the 7.62 mm machine guns were replaced with 12.7 mm ones. And the plane was 300 kg lighter. It was the lightest fighter plane of that period. And it is precisely the weight that determines many of the plane's essential characteristics, such as the take-off run, manoeuvrability in battle and controllability in flight.

Not only Soviet pilots, but also the French pilots of the Normandie-Niemen Regiment who fought on the Soviet German front expressed a high opinion of the Yak-3 fighter. The author quotes them in his book. After VE-Day the French flyers flew in them to Paris. The Soviet Government presented the French pilots with the planes they fought in and gained victory. Yakovlev writes that in France the Yak-3 were in service till 1956 without a single accident. One of them has been preserved and is now on display in the Museum of Aviation in Paris.

After the war foreign military writers pointed out that the Russians had developed aircraft with excellent performance characteristics and well-suited for mass production, easy to service and suitable for pilots with a relatively short period of training.

In this connection Yakovlev writes:

"Before the war the development of fighter aviation in Great Britain, America and Germany was characterised by a marked trend towards increasing the weight of this type of plane. The war showed that this trend was unsound. However, the Germans, for instance, could do nothing to correct it. The planes were put into mass production. To stop a works in order to discontinue the production of one plane and replace it with another was tantamount to disaster for

Germany, especially in the context of the war."

Soviet designers, as is evidenced by the book under review, stood the test of war with honour. During the war their aircraft were repeatedly modernised. As a result, the speed of Soviet planes, their range and fire power were considerably increased. Despite this, the total output of aircraft, far from decreasing, steadily mounted. The improvements were well thought out from the standpoint of production requirements. Thanks to this they were introduced without interfering with the quantitative output of machines.

After the war Yakovlev's design bureau developed the Yak-15 jet fighter on the basis of the Yak-3. Test pilots M. Ivanov and P. Stefanovsky were awarded the title of Hero of the Soviet Union for testing and mastering it.

This plane was followed by advanced machines. For instance, the Yak-25 all-weather barrage interceptor won universal fame. It was equipped with an original bicycle undercarriage. The engines were arranged in pylons under the wings on either side of the fuselage. This machine provided the basis for the development of several series of Yak-28 multipurpose supersonic aircraft.

In autumn 1966 an unusual flight was demonstrated to the leaders of the Communist Party and Soviet Government at an airfield near Moscow. Alexander Yakovlev describes it in the book. With the engines roaring the machine smoothly soared vertically into the air like a helicopter without a take-off run. The plane hung in the air at a height of 20-30 metres for a few seconds and then rapidly gained speed. Then it zoomed at a tremendous speed above the ground. The plane made another circuit, slowed down to zero speed to make a soft touchdown on the field. The performance was welcomed with applause.

Leonid Brezhnev approached A. Yakovlev, congratulated him on

the achievement and thanked him for the new machine. This was indeed an outstanding achievement of the design collective. The team was the first in the USSR to solve one of the most difficult problems in aviation, namely the development of a vertical take-off and landing aircraft.

As of today Soviet industry has built over 66,000 combat, passenger, trainer and sports planes designed by Yakovlev. They are well-known in many other countries. For instance, the Yak-40 is being widely used as an airliner not only in the USSR, but also in many countries of Europe, Africa and Latin America.

The Yak-18PM, Yak-18PS and Yak-50 sports planes are known for their splendid performance. Soviet men and women pilots have repeatedly won world flying championships in them. The sports pilots of many countries fly these planes.

A. S. Yakovlev deals with many questions of scientific and technological creativity in development of aviation. The book covers a period of more than 50 years. The author acquaints the reader with many of his contemporaries, writes about his meetings with statesmen, political leaders, scientists and designers.

"The Notes" are memoirs. Proceeding from the experience of his life and creative work the author gives an insight into the history of development of Soviet aviation, the upbuilding of socialism and its defence with the help of armed force during the Great Patriotic War. He gives thought to the place and role of man in socialist society and the responsibility of the scientists for the destinies of mankind. He also writes about the joys of scientific creation.

Concluding the author writes:

"The designer should also be a dreamer. It is precisely in dreams that new ideas and new design concepts are born together with the means about their realisation. To realise a dream is a great purpose of a man's life, especially a designer's."

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AIR FORCES

BIOGRAPHICAL DATA ON AIRCRAFT DESIGNER A.A. MIKULIN

Moscow SOVIET MILITARY REVIEW in English No 2, Feb 80 pp 34-35

[Article by Lt Col V. Aidarov: "Aircraft Engine Designer"]

[Text]

When we speak about aviation, we name aircraft designers and only occasionally do we remember aircraft engine designers. The engine is the heart of the plane and on its condition depends to a great extent the quality of the winged vehicle. During the 1930s Soviet pilots set a number of world records on the Soviet-made aircraft in altitude, speed and distance flown. Notably, the majority of the planes were provided with aircraft engines designed by Alexander Mikulin.

A. Mikulin was born on February 14, 1895, in the town of Vladimir. A nephew of Professor N. Ya. Zhukovsky,* he became an aviation enthusiast while he was still a boy. Having finished the Moscow Higher Technical School, now the Higher Technical School named after N. E. Bauman, at the beginning of the First World War, he took part in a competition in designing an incendiary bomb and was awarded first prize.

* Nikolai Zhukovsky (1867-1921) —founder of contemporary hydro- and aerodynamics. He elaborated the formula of wing lift, the propeller vortex theory, determined the most advantageous wing and the aircrew sections. V. I. Lenin called Zhukovsky "the father of Russian aviation."

In 1923 Mikulin began to work as aircraft engine designer and in 1925 was appointed general designer. A gifted engineer, scientist and organiser, he welded together a closely-knit group of capable specialists. Under his leadership and with his most active participation the AM — Alexander Mikulin — series of aircraft engines were designed and manufactured.

The first Soviet powerful water cooled engine, the AM-34, appeared in 1932. It had 12 cylinders arranged in the shape of a V and developed a power of 850 hp (a record at the time). The AM-34 engine was installed on TB-3 heavy bombers and ANT-25 planes on which the crews of Valery Chkalov and Mikhail Gromov performed the record long-distance non-stop flights from the USSR to the USA via the North Pole.

In those years the aircraft design bureau headed by A. N. Tupolev designed the TB-7 all-metal heavy bomber. This was a brilliant development of the cantilever monoplane design earlier used in TB-1 and TB-3 heavy bombers. The plane had four AM-34 engines and an engine for supercharging the main engines. Thanks to this the plane's

ceiling reached 11,200 m — an unbelievable altitude at the time for planes of this type. At the altitude of 8,600 m the TB-7 developed a speed of 430 km/h and had a range of 4,500 km carrying a 400 kg of bomb load. By its characteristics the TB-7 was superior to the "flying fortress" manufactured by the US "Boeing" firm.

In 1936 Mikulin's design bureau created the AM-35A engine. At an altitude of 6,000 m it developed a power of 1,200 hp. During the Great Patriotic War this engine was installed on the MiG-3 fighters designed by A. I. Mikoyan and M. I. Gurevich.

The MiG-3 was the fastest speed and highest altitude aircraft at the time and was distinguished by its large safety margin. Colonel-General of the Air Force A. Katrich, Hero of the Soviet Union, narrated the following episode. One day in September 1941, after a fierce dog-fight he was returning to his aerodrome. Ammunition and fuel were running out and therefore the pilot gained an altitude of 9,800 m at which no encounter with the enemy fighter planes was possible. But enemy bombers were a different matter. One of them was on its way to bomb the Soviet capital. The enemy pilot did not expect to meet a Soviet fighter at such an altitude. "This made it easier for me to attack," Katrich said. He immediately attacked the enemy and put the gunner out of action. But Katrich himself ran out of ammunition. The pilot slashed first one fin of the enemy bomber and then the other with his aircrew. The enemy plane crushed to the ground, while Katrich landed his MiG safely and flew a combat mission on the same plane the next day.

On the bank of the Oka River, near Moscow, there is a model in granite and bronze of the MiG-3, that reliable defender of the Moscow skies. It is a monument to the

courageous pilots and aircraft builders including A. A. Mikulin, an aircraft engine designer.

A further development of the successful AM-35A engine design resulted in the AM-38 engine intended specially for the Il-2 attack aircraft designed by S. V. Ilyushin. During the war (1941-45) 41,000 Il-2 aircraft or modifications of it were provided. The Nazi pilots and officers and men of the Wehrmacht called these planes "black death." Firing with cannon and machine guns, the attack planes destroyed enemy fire weapons and equipment sowing fear and disarray among the Nazi soldiers. Besides excellent flying and fighting qualities, the aircraft and its engine were noted for their extraordinary reliability and survivability. One Il-2 flew over 150 sorties, suffered 600 bullet holes or other battle damages but invariably returned to base.

All German attempts to copy the Il-2 and produce a plane similar to it failed. No plane of any other air force came anywhere near, much less equalled the Il-2. Today a monument to the Il-2 aircraft perpetuating the labour of its creators and the heroism of its pilots can be seen on the bank of the Istra River, near Moscow.

At the end of the Great Patriotic War more powerful (2,000 hp) AM-42 aircraft engines were installed on Il-10 combat planes. Similar engines were designed and manufactured for torpedo boats and river armoured boats.

Mikulin has to his credit a number of new ideas in engine building: he introduced such novelties as regulation of superchargers with the aid of variable blades, two-speed superchargers and high pressure charging and cooling of the air in front of carburetors. He developed a turbo-compressor and a variable pitch screw.

At the end of the Second World War the aircraft with piston-engines

(engine-propeller power units) reached speeds up to 600-700 km/h and altitudes of 12-13 km. Further increase in speed and altitude with power plants of this type was impossible. To increase the flight performance of aircraft a power plant of a basically new type — a jet engine — was necessary.

The first engines of this kind had, as a rule, a centrifugal compressor, with which a high or super-high thrust was impossible. Therefore A. A. Mikulin, heading the design bureau, his deputies S. K. Tumanov and B. S. Stechkin made a thorough study of the possibilities of designing economic gas-turbine engine with a greater thrust. Such an engine marked as the TKRD-1 (a turbo-compressor jet engine, No. 1) was created in 1947. It had a thrust of 3,780 kgf. Subsequently new and more powerful engines were designed on the same principle. Among them were the AM-3 engine and its modifications with a thrust of 11,500 kgf which were installed on Tu-16 bombers and Tu-104 passenger liners.

Mikulin's creative activity was closely connected with the activities of such aircraft designers as Tupolev, Mikoyan, Ilyushin, Yakovlev and others. Mikulin was always notable for his high exactingness to himself and was exacting and strict towards his colleagues and subordinates. As aircraft designer A. Yakovlev recalls in his book "The Aim of My Life," at responsible meetings including those in which members of the Soviet Government took part, Mikulin could sharply and wittily ridicule a person of any rank if that was in the interests of the cause, very often not recognising any authority. Many were afraid of his sharp words. Nevertheless air-

craft designers liked to work with him, found a common language with him. During discussions new ideas were born which later were successfully translated into life. The best evidence of this is provided by the original aircraft designs mentioned above.

Nowadays Academician Mikulin despite his old age works at one of the institutes of the USSR Academy of Sciences. He is a Hero of Socialist Labour, four times USSR State Prize winner and has been awarded three Orders of Lenin and other Orders and medals.

A. A. Mikulin does not confine his activity to aircraft engine designing. Being a man of great erudition and an inquiring mind he frequently and daringly intrudes upon fields of science and technology which are far removed from aviation. For example, he is the author of an air ozonizer and humidifier, producing negatively charged ions. These devices have been used in hospitals and sanatoriums. He advanced a hypothesis about the accumulation of static electricity in the human body which harmfully influences the person's psycho-physical condition. Mikulin considers it advisable to "ground" the human body periodically (for example during sleep). A book of his containing advice and reflections on ways of achieving good health, creative longevity, lucidity of reasoning and emotional stability was published several years ago. The suggested measures, Mikulin says, allow him to maintain to this day his good cheer, capacity for work and creative activity.

A. A. Mikulin's life and work are a brilliant example of dedication to science and disinterested service of the Motherland.

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GROUND FORCES

MOTORIZED RIFLE BATTALION DESERT TRAINING

MOSCOW SOVIET MILITARY REVIEW in English No 1, Jan 80 pp 16-17

[Article by Col V. Grinev [Grinyov]: "An Enveloping Detachment in a Desert"]

[Text]

When holding defences in a desert the main effort is concentrated on holding vitally important areas, lines and objectives. Since there are big gaps not occupied by the troops between subunits the attackers can use them to approach undetected and strike sudden blows at the defenders from the flanks and the rear. For this purpose wide use may be made of enveloping detachments. They are composed of the most manoeuvrable subunits. A motorised infantry battalion on IFVs can be such a subunit.

At a tactical exercise the attacking subunits were stopped by well-organised "enemy" fire and mine fields. Repeated attacks brought no success. Then the commander decided to bypass the centre of resistance with part of his forces and to rout the "enemy" by a coordinated attack from front and rear. To deliver the blow from the rear he detailed an enveloping detachment consisting of a motorised infantry battalion reinforced with tanks, artillery, a seapper subunit and anti-aircraft weapons.

From the combat order the battalion CO specified the composition of the enveloping detachment, its mission and the time of its execution; the direction and the beginning of actions; means of support; coordination signals with the subunits acting from the front; the means of designating the position of the enveloping detachment to the friendly aircraft and also places and order of designating the smoke reference points.

The mission of the enveloping detachments at these exercises was to bypass undetected the

"enemy" defending an important road leading to the Karkuduk Forest, to attack him from the rear and thus to promote a success of the main forces advancing from the front.

The Karkuduk Forest was located between the difficult to negotiate Karasai Sands and the extensive "wet" Tulkuli Saline. The main roads leading to the oasis where there were water sources ran through this forest.

While estimating the situation the battalion CO foresaw that the "enemy" would not disregard his flanks and rear, despite the fact that they were reliably covered by the salt-marshes and difficult sands. Therefore right on being assigned the mission he sent out a fighting reconnaissance patrol in the operational direction of the enveloping detachment. Subsequently the fighting reconnaissance patrol provided the enveloping detachment's commander with reliable and timely data on the "enemy" and the terrain.

The battalion CO was forced to organise battle of the enveloping detachment in a short time on the map, having only limited information on the "enemy." He was well aware that success would depend on the unexpectedness of the blow and this unexpectedness could be achieved only by concealed, rapid action which would take the "enemy" by surprise.

The detachment was ordered to bypass the centre of resistance through the hilly Karasai Sands. The relief of these sands favoured bypassing them undetected, but the dust raised by the moving column betrayed the enveloping detach-

ment. The wind was of average strength blowing from the side of the sands towards the "enemy." The battalion CO decided to make use of the dust appearing in the "enemy" defence area from the bursting shells of the friendly artillery at the beginning of the bombardment.

The enveloping detachment was to operate on ground offering no clear reference points, in intense heat, against an experienced well-trained "enemy" provided with the up-to-date weapons and equipment. The battalion CO had paid serious attention to preparing the weapons and equipment for operation in complicated desert conditions. During the maintenance of vehicles the men checked the engines' cooling system, the sealing of doors, hatches, covers, the condition of hoods and ventilators in fighting and troop-carrying compartments. A supply of tea for a day in water bottles and cisterns for drinking water was provided in the battalion.

At the appointed time on the signal of the superior commander the enveloping detachment under the cover of artillery fire began a rapid advance enveloping the defending "enemy." An advance party under an experienced company commander was sent forward. The battalion CO personally moved immediately behind the advance party. The chief of staff was in command of the column of the enveloping detachment's main forces. The motorised infantry subunits advanced with the reinforcing means.

A great and responsible mission was assigned to the commander of the advance party. Despite the complicated weather and terrain conditions, orienting himself by the sand hills and previously calculated bearings, he confidently led the subunit at high speed along the indicated route, ensuring uninterrupted movement of the detachment's main forces.

When the enveloping detachment had negotiated the Karasai Sands the battalion CO received a message from the commander of the fighting reconnaissance patrol saying that the patrol had detected an "enemy" ambush by Hill 560.0 and a mine field among the sand hills near the Andrakhai Forest.

The detachment commander understood that these were manpower and equipment covering the flank and rear of the main "enemy" grouping holding the defences in the area of the Karkuduk Forest. Having assessed the situation he concluded that the "enemy" would be able to hold up the enveloping detachment for a certain time and thus prevent it from carrying out its combat mission unless urgent measures were taken.

In order not to spend time destroying the ambush and breaching obstacles in the mine field he decided to ask the senior commander to neutralise the ambush with artillery fire and ordered the fighting reconnaissance patrol commander to adjust that fire because the thick dust did not allow the artillerymen to observe the results of the firing. Besides, it was very difficult to determine the coordinates of this target with sufficient accuracy. Initiative, courage and resourcefulness allowed the reconnaissance men of the detachment to cope successfully with their mission.

The fighting reconnaissance patrol continuing reconnaissance penetrated into the "enemy" rear and by daring actions revealed the main targets there and reported them to the enveloping detachment commander. Meanwhile, the advance party was completing the destruction of the ambush and combat engineers included in it were finishing breaching the obstacles and designating the gap through the "enemy" mine field.

By the end of the bombardment of the "enemy" strong points and artillery batteries, the advance party had emerged from the Karasai Sands, deployed into battle formation and attacked one of the "enemy" strong points located in the depth of his defences. The unexpected and courageous actions of the advance party ensured successful deployment of the main forces of the enveloping detachment into combat formation.

For orientation during the advance to ensure control of the organic and attached subunits during deployment into battle formation and during the attack, wide use was made of smoke reference points, which were laid by the battalion means and those of the superior commander.

As soon as the advance party engaged the "enemy," the battalion CO advanced closer to it and personally observed the battlefield. This allowed him to estimate the situation exactly and specify in good time his decision, missions for his subordinates and questions of cooperation.

The joint attack of tanks and motorised infantry subunits, the main forces of the detachment, began with the support of artillery fire. The motorised infantry subunits attacked on the vehicles. This allowed maximum use of the manoeuvring qualities of the enveloping detachment. The suddenness and speed of the attack stunned the "enemy."

The subunits advancing from the front, taking advantage of the enveloping detachment's actions, rapidly attacked the "enemy," broke through his defences and successfully pressed home the attack into the depth in the direction of the oasis.

The excellent training standard of the commanders, the skill and team-work of the personnel, their ability to handle their first-class weapons and equipment and also their high physical and moral qualities secured success in the battle.

Colonel V. GRINYOV

GROUND FORCES

MOTORIZED INFANTRY TACTICAL TRAINING

Moscow SOVIET MILITARY REVIEW in English No 1, Jan 81 pp 29-30

(Article, published under the heading "Combat Training," by Lt Col A. Chulanov: "Concealment and Surprise")

(Text)

In modern battle the situation changes so sharply and quickly that frequently some subunits are separated from the main body. They have to act with exposed flanks and large gaps, so that often enough their situation is rather complicated. In such conditions the commander must be able to estimate the situation quickly and take the only correct decision. But he can do this only if he has a deep understanding of the nature of modern battle, knows the manuals and regulations well and is able to apply their prescriptions creatively in practice.

In this connection I should like to recall something that took place at a tactical exercise. The situation at the time was as follows (see Sketch).

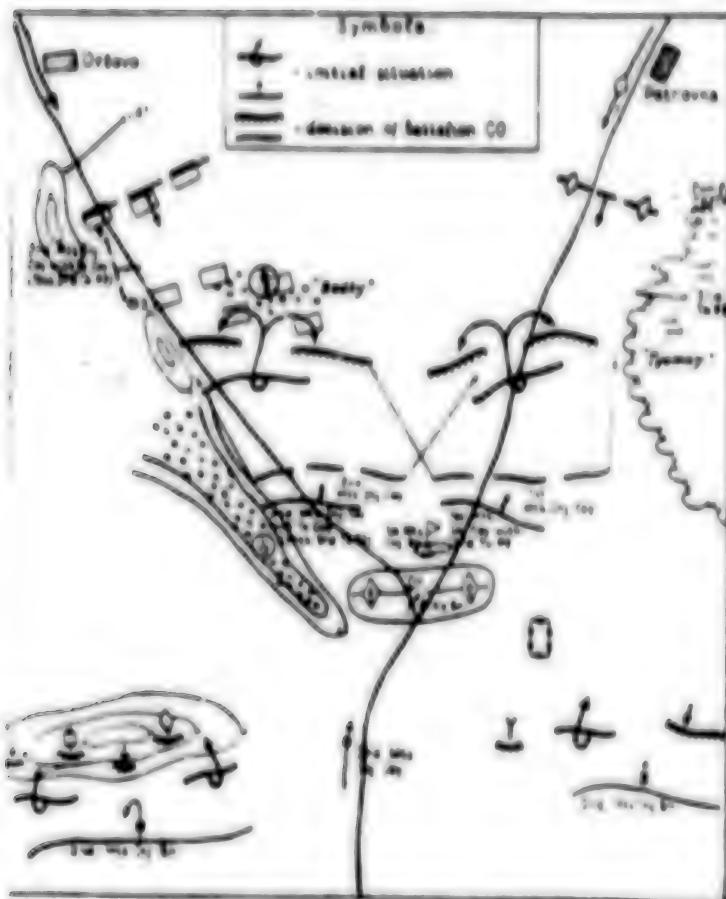
The 1st Mts Inf Bn (on IFVs) under Major Kazanchikov, reinforced with a tank company, an artillery battalion and a mortar battery was operating on the main line of advance. Having broken through the "enemy" defences, the battalion set off in pursuit of the defenders, who were withdrawing to the intermediate line. The right neighbour (the 3rd Mts Inf Bn of the neighbouring regiment), overcoming stubborn resistance, slowly pressed home the attack in the depth, but on the left the 2nd Mts Inf Bn was stopped by organised fire from a strong point. As a result, the 1st Mts Inf Bn found itself far ahead of the main forces. The battalion CO was faced with the question: "What is to be done? Continue the pursuit? But now there was a danger of 'enemy' blows at the exposed flanks. Stop and wait for the neighbours? — then the defenders would withdraw unopposed to the intermediate line, consolidate on it and organise stable defences." Having weighed up the pros and cons and taking into consideration that the best help for the subunits lagging behind would be to exploit the success without losing time, the battalion CO,

first sending out an additional reconnaissance party in the direction of the flanks and giving orders to intensify observation, continued the pursuit.

Meanwhile information came from the unit commander that up to an "enemy" battalion on APCs was advancing in the direction: Orlovo-nameless hills. Communications were suddenly interrupted. The battalion's combat reconnaissance patrol, reaching the northern edge of Tyomny Wood, reported that up to two tank companies were moving along the road from the inhabited locality of Petrovka in the direction: Tyomny Wood-enclosure.

Having quickly estimated the situation Major Kazanchikov came to the conclusion that the "enemy" intention was apparently that the withdrawing subunits should hold the defences on the intermediate line and stop the attackers while simultaneous attack in converging directions should cut the battalion off from the main force, scatter and destroy it. This would create a critical situation. In the given situation the "enemy" was clearly superior in strength. The situation was aggravated by the fact that the battalion was unable to re-establish communication with the unit commander and could rely only on itself. Thus the battalion was threatened with defeat. A decision had to be taken immediately. But what decision? To continue the offensive was out of the question. Assume the defensive? But the battalion was unable to consolidate on the line it had reached (Major Kazanchikov calculated that a counterattack would come in some 25-30 minutes). The "enemy," using its available forces, could surround the battalion and destroy it before the arrival of the neighbours.

Then the battalion CO took the following decision: the 3rd Mts Inf Coy with a Tk Coy (less the 3rd Tk Pl) under cover of the depression and the hills in front was to reach



undetected the line: borrow-3-spring and with fire support from the artillery battalion, by attacking simultaneously with other subunits of the battalion in the direction: spring-enclosure to destroy the advancing "enemy" reserves and then press home the attack in the direction: enclosure-Orlovo.

The 1st Mts Inf Coy was to consolidate on the line reached and not to allow any breakthrough of "enemy" tanks in the direction: Petrovka-enclosure. The company's infantry fighting vehicles and the 3rd Tk Pl (both under the orders of the 3rd Tk Pl commander) were to advance to the north-western edge of Tyomnoe Wood, to camouflage, to lay an ambush, to open surprise fire on the advancing column and to complete its rout by attacking in the direction: western edge of Tyomnoe Wood-Redky Bushes.

The artillery battalion was assigned the mission to slow down the advance of the "enemy" battalion from Orlovo by fire from the occupied positions, to strike at him on the line of deployment and support the attack of the 3rd Mts Inf Coy with the Tk Coy.

The mortar battery was to destroy the artillery battery in the bushes, and then to shift fire onto the withdrawing "enemy" subunits.

The 2nd Mts Inf Coy was to consolidate on the line

reached, not to allow an "enemy" breakthrough in the direction: Orlovo-enclosure and to be ready at the general signal to attack along the road in the direction of Orlovo to complete the rout of the withdrawing subunits of the defenders.

Major Kazanchikov confined himself to assigning missions to his subordinates as he had no time left for organising cooperation. But these questions found their reflection in his instructions. Such a decision was appropriate.

Of particular importance also is the order in which the battalion CO assigned missions. First of all he assigned the mission to the 3rd Mts Inf Coy, which was in the second echelon. It needed 20 minutes to reach the assault position. Then to the 1st Mts Inf Coy—its infantry fighting vehicles and Tk Pl were to perform a march and lay an ambush on the north-western edge of Tyomnoe Wood, which also took 20 minutes.

After that instructions were given to other subunits. They were given by radio and this allowed the commanders to know not only their own missions but also those of the battalion's other subunits.

Major Kazanchikov understood that in the given situation success could be achieved only if he acted cour-

genously, resolutely and what was most important, by surprise. There was of course an element of risk. If the opposing side discovered prematurely the ambush and the 3rd Mts Inf Coy advancing to counterattack, then the main factor—surprise—would be lost and that put the battalion in an extremely difficult position. But in case of successful implementation of the decision the battalion could dictate its will to the "enemy." He who has the initiative has more chances of victory.

How did events develop?

Soon a column appeared from Orlovo with a march security element moving ahead. It did not expect to meet the attackers on this line and confined itself to a visual inspection of the nameless heights. This allowed the 3rd Mts Inf Coy with the Tk Pl making use of the bushes in the depression to concentrate undetected in the northern part and get ready for a counterattack. The artillery battalion opened fire at the "enemy" and this forced him to deploy into battle formation.

Meanwhile the "enemy" appeared coming from Petrovka. Here he was more careful. A patrol tank swung off the road and began to move in the direction of Tyomny Wood. The Tk Pl commander decided to let it pass without any obstruction. But it went straight towards the ambush. There was an immediate danger of the ambush being prematurely discovered. The only alternative was to destroy the tank. A single shot of a tank gun did not draw the attention of the "enemy," being muffled by the noise of battle. Everything happened so unexpectedly that the

patrol tank commander was unable to warn the main forces of the danger and the column continued calmly to move along the road. When the head of the column reached the edge of Tyomny Wood, the tanks and infantry fighting vehicles simultaneously opened fire at short range. Their fire was unexpected and destructive. Eight "enemy" tanks were put out of action by the very first shots. The "enemy" began to deploy into battle order but was hindered because the fighting vehicles were simultaneously "hit" at the head, centre and tail of the column. Fire from the ambush was highly effective. More than half of the tanks were "destroyed."

At that time on a signal of the battalion CO the 3rd Mts Inf Coy with the Tk Pl launched a counterattack at the flank and rear of the battalion advancing from Orlovo. The signal to pass over to the offensive was also received by other subunits of the battalion. The defeat of the "enemy" was completed by a blow from three directions.

Thus, the manoeuvre the "enemy" was going to use against the attackers was used against him. Only Major Kuzenichikov managed to carry it out undetected and by surprise, which determined his final success.

This example is further proof that one can find a way out of a critical situation and achieve success even against bigger forces. But to do so the commander must find his bearing quickly in the situation, display initiative, seek to achieve surprise, forestall the enemy in his actions, search for new methods and technique of fighting.

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GROUND FORCES

DISCUSSION OF COUNTERATTACK OPERATIONS

Moscow SOVIET MILITARY REVIEW in English No 1, Jan 81 p 31

[Unattributed article: "Modern Battle: Questions and Answers"]

[Text]

Why counterattack the enemy who have penetrated the defences if more of them and their weapons can be destroyed by stationary fire?

Why indeed? The experience of the Great Patriotic War shows that while repulsing the enemy attacks from stationary positions one entrenched tank of the defenders can destroy an average of 2-3 tanks of the attackers, one soldier, 5-10 enemy soldiers and so on. These figures may vary depending on the moral-political qualities and the fighting efficiency of the men, the technical condition of the weaponry, organisation of the terrain with engineer works, artillery, air action, etc.

In a counterattack the combat capabilities of the attackers and the defenders are approximately equal because both sides carry out their missions by an offensive. The defenders are fully or partially deprived of such advantages as defence by engineer constructions, camouflage, prepared fire systems and protection by mine fields.

None the less, counterattacks were widely practised in the past war and the art of war does not dispute their decisive importance in defensive battles of the future. How can one explain this paradox? Let us begin with the purpose of the defensive. Its purpose is to repulse an offensive by superior enemy forces, to defeat them, to hold the occupied areas and positions and thus to create favourable conditions for passing over to the offensive. This is achieved by the staunchness and activity of the defence. So far as a counterattack is concerned, it is the highest form of activity in a defensive battle.

Stable, deep-echeloned defences, well provided with engineer constructions had been organised for holding areas and positions. But, the attacking side, having the initiative, chose the direction of the main blow unknown to the defenders, concentrated on it superior manpower and equipment and defeated the defenders on the breakthrough

sector by artillery fire and air attacks and by a concentrated attack of infantry and tanks broke through the forward line of defence and penetrated to the depth of the defences. In order to prevent any further broadening of the breakthrough sector by the attackers towards flanks and in depth and to hold the occupied positions it is necessary to manoeuvre with men and equipment in the threatened direction and to carry out a counterattack. Only by a counterattack can one re-establish the original position.

For a counterattack to be effective a number of conditions must be observed.

First of all it must be well prepared. This means that even before the beginning of the action every officer, sergeant and soldier must know exactly their combat mission and how to fulfil it in cooperation with the other arms of the service. For this purpose training is carried out with subunits participating in a counterattack during which they reach the appointed lines, deploy into a battle formation and carry out engineer equipping of the routes of advance. The routes are chosen taking into account the possibility of an undetected advance and a surprise counterattack. Great attention is paid today to the fulfilment of this demand. The experience of the war in the Middle East showed that helicopters are a formidable antitank weapon. If the movement on the line of counterattack is detected helicopters can destroy tanks — the main striking force of the counterattacking subunits and thwart the counterattack.

It is very important to be able to estimate correctly the intentions and the strength of the enemy who have broken through, so as to decide whether to carry out a counterattack or not. If the decision is affirmative then in what direction and at what time to carry it out. It is advantageous to carry out a counterattack when the advancing enemy tanks and infantry have been stopped and the

bringing up of reserves is prevented. As a rule, before a counterattack a short but powerful air attack must be carried out to stun the enemy, to attack him with fire and break up his battle formations.

A counterattack will be effective if it comes by surprise as a rule against the flank or rear of the advancing enemy, i.e. his most vulnerable spots. In response to the counterattack the enemy is forced to take away men and equipment from other directions or to abandon the captured lines.

Thoroughly prepared, courageous, surprise counterattacks against the flank and rear of the enemy breakthrough grouping can lead to his encirclement and complete destruction. A counterattack frequently develops into an offensive.

Such results cannot be achieved by passive defence. Therefore, counterattacks continue to be an indispensable feature of defence.

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GROUND FORCES

TANK MAINTENANCE IN COMBAT

Moscow SOVIET MILITARY REVIEW in English No 1, Jan 81 pp 34-35

[Article, published under the heading "Specialist's Tips," by Col G. Petrovskiy: "Technical Servicing of Tanks (Motorised Infantry) Battalion on the March"]

[Text] A battalion's successful execution of missions on the march and during subsequent combat operations depends largely on the correct organisation of technical service, i.e. timely and prompt refuelling of vehicles, efficient supervision of the entire set of maintenance operations, repair and recovery of combat equipment, and also on the men's proficiency.

PREPARATION FOR A MARCH

THE main task in preparing for a march is to ensure reliable operation of vehicles and their timely arrival at the designated area in complete combat readiness.

The technical servicing of a battalion preparing for a march is organised on the basis of the warning order from headquarters and the regimental deputy CO for technical service. This order sets forth the measures to be taken and outlines the sequence and methods of their implementation. Proceeding from the time available and the conditions, the battalion prepares vehicle crews (drivers) and personnel of technical service sub-units, armoured and automotive equipment, and replenishes stocks of armoured and automotive spares.

Training of crews (drivers) and personnel of technical service subunits is aimed at increasing march speed and ensuring correct operation and repair of vehicles.

Training in the battalion is organised by the deputy CO for technical service with due account of the peculiarities of the operation, repair and recovery of combat equipment, and the personnel's

proficiency. In battalions and companies subunit commanders or their deputies hold briefings and practical or demonstration lessons. The men study the nature and route of movement, speed conditions and driving peculiarities, procedure for supervising the operation of vehicle units and assemblies, safety measures, the scope, place and manner of servicing, repairing and recovering vehicles, methods of chemical and radioactive de-contamination of vehicles prior to maintenance or repair, etc.

In the event of a long preparation for the march lessons are also held on the specifics of equipment operation in the conditions of the forthcoming march and practical training is organised to improve the skills in vehicle driving, maintenance and repair of faults detected. The personnel of technical service subunits are also trained in organising recovery and repair of vehicles on the march, and in rendering assistance to crews in maintaining their vehicles.

Preparation of armoured and automotive equipment includes checking vehicles' technical condition and eliminating detected faults, replenishing individual SPTA sets, providing means for improving the vehicles' cross-country capacity and additional fuel containers, and performing repair operations involving replacement of individual parts and units.

The volume of maintenance operations is determined proceeding from the assumed driving time on the march and subsequent combat missions, running hours to go till the next maintenance, the time available and the vehicles' general condition.

If the equipment was not in storage, maintenance operations are performed within the scope of which the number of running hours till the next No. 1 or No. 2 maintenance would ensure reliable operation not only during the forthcoming march, but also during subsequent combat operations. This is particularly important in view of the contemplated commitment to action from the march column, as the battalion has but limited time for servicing vehicles on the march and no time at all for maintenance in the course of a meeting engagement.

In preparing for a long-distance march, special attention is paid to tanks' running gear and tracks with metal hinges. The tracks are adjusted so as to avoid the necessity to tension them or replace track links before the next halt.

Primary attention is given to adjusting the control linkage, serviceability of the night vision devices and blackout arrangements, stop signals, marker lights, turn signals, and availability of self-recovery facilities.

Shortage of time does not always allow all maintenance operations to be carried out. Therefore, emphasis should be laid on the operations determining vehicles' reliability and combat efficiency on the march and during a meeting engagement. Other operations are performed at halts. During preparation of equipment and its maintenance the crews are aided by maintenance sections and the necessary specialists, and supplied with repair subunits' facilities.

Training of technical service subunits takes place simultaneously with the training of fighting subunits. It includes checking condition of workshops and tractors and providing them with the necessary tools and cross-country equipment.

When preparing for a march armoured and automotive equipment is replenished with individual SPTA sets taking into account probable expenditure and established ammunition rates. Stocks supplied to the technical trail must ensure the functioning of the technical service section for 2-4 days.

ON THE MARCH

The battalion performs the march in a single column. Combat subunits are followed by logistics subunits. The latter are followed by the technical trail including a maintenance section, a fuel-and-oil vehicle and a tractor. If necessary, the technical trail may be reinforced with regimental recovery facilities.

The technical trail carries out the following missions: finds out the place and cause of vehicle failure, determines the means of eliminating troubles, provides assistance to crews of damaged vehicles and issues spare parts, recovers unserviceable or immobilised vehicles, tows individual faulty vehicles to the halt area, and renders aid to crews in maintaining and repairing vehicles at halt and rest areas.

Help given by the technical trail to crews of disabled vehicles generally involves determining the trouble, giving advice and providing with the necessary spare parts for repair. Faulty APCs and trucks are towed to halt and rest areas to be rehabilitated. Vehicles which, for some reason or other, cannot be towed are left on the march route.

To negotiate difficult sectors of the terrain or water barriers, recovery facilities are sent in good time to precede the march column. They generally follow the movement support detachment or advance guard on their way to crossing areas and difficult sectors of the terrain. Besides, vehicles provided with winches and cross-country facilities are distributed along the column.

Maintenance is carried out at halts, both by day and by night. Short halts at 3-4 hour intervals are used to check the vehicles' running gear, their units and assemblies for heating, adjust track tensioning, check tightness of systems and units, SPTA stowage, reliability of control linkage, and to top up some vehicles with fuel, engine oil and coolant. To reduce refilling time, fuel is carried on the tanks in containers.

At long halts vehicles are checked and topped up with fuel, engine oil and coolant.

After the halt, the technical trail facilities start moving together with the battalion to ensure prompt elimination of faults and timely execution of repair and recovery operations in the event of the battalion being committed to action from the march column.

Daily maintenance of armoured and automotive equipment is organised at the rest area after a day's march, special attention being given to assemblies which failed more frequently than the others. If schedule maintenance operations were not completed before the march due to lack of time, the daytime rest is used to perform the most vital operations.

No. 1 and No. 2 maintenance may also be carried out discriminately at rest areas with obligatory assistance of the battalion's technical service sections and, in individual cases, of the regimental repair subunits.

Checking of execution of maintenance operations before and during the march is exercised by subunit commanders and their deputies for technical service.

Correct and efficient organisation of maintenance on the march promotes the battalion's successful fulfilment of the assigned missions.

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GROUND FORCES

PSYCHOLOGICAL TRAINING: THE SOLDIER'S INITIATIVE

Moscow SOVIET MILITARY REVIEW in English No 1, Jan 81 pp 36-37

[Article, published under the heading "Psychological Training," by Maj Gen A. Belov: "A Soldier's Initiative"]

[Text]

A soldier's initiative in action implies his ability to find new and original methods for carrying out the assigned mission and also to use means which help him to achieve the set purpose quickly.

On the surface it may seem that a soldier cannot show initiative in battle being limited in his actions by the orders and instructions of his commanders and also by the requirements of the manuals and regulations. None the less, the Oath of Allegiance and the regulations of the Soviet Armed Forces consider initiative as necessary quality in a serviceman. According to these documents to be successful a soldier must act bravely in battle, persistently implement the decision taken and not be afraid to show a reasonable initiative in unconditionally carrying out his commander's order.

It should be borne in mind that military documents, orders and instructions usually confine themselves to specifying the final purpose of action, allowing the soldier to show self-dependence and initiative in selecting the appropriate means for fulfilling his combat mission in the best possible way.

Resourcefulness and proficiency in tactics and the ability to implement the commander's intention quickly and resolutely—such are the qualities indispensable for victory. The fighting men usually have to carry out their mission in a dangerous and quickly changing situation. This requires them to think creatively in order to be able to produce new decisions and methods of action. These are not always foreseen by the relevant order or command. It is worth mentioning here once more that on the battlefield a soldier must act according to the situation that takes shape.

..During the Great Patriotic War (1941-1945) two gunners, Private Chunayev and Gogoberidze were ordered to retrieve from no man's land an antitank gun left there after its crew had been killed repulsing an enemy tank attack. The men mounted a tractor and, moving along a depression, headed for the gun. All of a sudden the enemy launched a new attack. Such a change in the situation had not been foreseen by the commander when he gave his order and this was but natural. What were the soldiers to do? They were far from the thought of returning to their battery without the gun. So, they left the tractor with the driver in the depression and started to crawl towards the gun. The weapon turned out to be in working order and there were some boxes of ammunition near it. The artillerymen decided to engage the enemy, sure that their commander would approve their initiative.

The nazis supposed that the antitank gun was disabled and this made them less watchful. Taking advantage of this the Soviet soldiers hit an enemy tank with the first shot, in a few seconds another tank was set on fire and the other three tanks turned back and left the battlefield. Having repulsed this attack the gallant gunners brought the gun into their battery lines. The commander's order had been carried out.

One can see that in battle a soldier uses his initiative to cope with his mission in the best possible way, i. e. by inflicting losses on the enemy.

Modern military operations differ very much from those of the last war. They are characterised by high dynamism and speed thus producing great strain in the belligerents. An abruptly changing situation on the battlefield may require a soldier to take independent decision in a matter

of seconds. It goes without saying that to emerge victorious from the situation the man, besides having technical competence and high skill in handling his combat equipment, must display high combat activity and initiative. A man possessing initiative can more easily cope with the difficulties he has to face, mislead the enemy and thus gain the upper hand.

A man's initiative should be justified, meet the requirements of the obtaining situation and be based on thorough analysis. Initiative running counter to the commander's order can do nothing but harm. For instance, if in the course of an offence a soldier detects an enemy fire emplacement hindering the advance of his subunit and takes the independent decision to destroy it, if he helps his fellow-soldier out of a difficult situation or stuns the enemy by his actions, he shows reasonable initiative which will be approved by his commanders in every possible way. However, if a soldier, acting on his own initiative, leaves a designated defence line or if he is too quick in opening fire when in ambush, he acts irresponsibly. To show reasonable initiative a man must know the manuals and regulations and strictly follow their instructions.

Taking the initiative is especially important when a man has to operate with a small group or independently as, for instance, on a recce mission or when discharging guard duty. In these circumstances he must be able to take immediate decisions and act according to the situation.

Like other combat qualities initiative is cultivated in the men during their combat training, political education and other kinds of educational work.

Reasonable initiative is based on creative thinking which is developed mainly by carrying out tactical and fire or technical tasks. Any fighting man, whether infantryman or missile operator, gunner or sailor, engineer or signalman, must be able to use his knowledge to operate skilfully in the field, on a firing position, at a tactical exercise and, in the final account, in battle. A man will be uncertain in practice if he has only theoretical knowledge which is merely a sum total of propositions he has learnt. His knowledge becomes really deep, if he improves it in practice by applying it to various combat missions.

Inexperienced soldiers not infrequently use one and the same method for carrying out their mission during tactical exercises. This makes them slaves of a certain pattern and naturally limits their initiative. The commander helps his subordinates to eliminate such one-sidedness by explaining to them that they must perform their mission using various methods and adapting them to the existing situation.

An urgent necessity to show initiative usually arises when the likely course of events planned in advance has to be changed to meet the requirements of a new situation. When a trainee, after assessing and understanding

his task, begins to implement his decision, it is a good practice to introduce elements of uncertainty in his mission. For instance, a machine gunner is ordered to destroy a target. But when he is about to open fire, his commander complicates the situation by introducing one more target — a primary one. Here is another example. A recce party commander was ordered to lay an ambush along the direction of the "enemy" advance. But having scarcely reached the place of the ambush the "enemy" suddenly changed his route. Such narratives create a situation calling for initiative and self-dependence in taking a decision.

It would be wrong to maintain that to develop creative thinking in a trainee it is sufficient to set him a certain number of appropriate missions. An instructive and skilfully conducted critique at which the trainees' actions are analysed and the results are summed up may also be useful in this respect. When analysing his subordinates' strong and weak points, the instructor tells them of several variants of performing the mission. It should be stressed that these exercises broaden the men's outlook and develop their creative thought.

The education of initiative is considerably influenced by the commander's ability to assess the men's actions properly. As a matter of fact, a man's initiative is not always rewarded with the desired results. For instance, at one tactical exercise Sergeant Galkin, acting as platoon leader, took an independent decision and ordered his men to board the tanks so as to bypass an "enemy" position. But he miscalculated and brought his men to the edge of a swamp, thus preventing them from acting for a long time while they were in search of a new road.

How did the commander assess his subordinate's decision?

Summing up he said:

"Sergeant Galkin's desire to show initiative deserves praise. In general his intention was correct and could well have brought him success. But the sergeant failed to assess the terrain properly. I advise him to practise topographic map reading and train persistently in finding his bearings on the terrain in different conditions."

The instructor was quite right in giving such an appraisal to the trainee despite his poor results. Otherwise he might have undermined the desire of the sergeant and the other junior commanders to use initiative.

It is impossible to have initiative without certain qualities of will. If a mission is simple enough, it may not require a man to display will power. Considering this, experienced commanders try to introduce various emotional and volitional elements in the missions they set their subordinates. This can be achieved by different means. Thus, they avoid giving all the data required by the mission. This makes the trainees show persistence in supplementing the available data and this, in turn, favours the

development of their will.

To impose more strain on the trainees' will, it is expedient to introduce contradictory elements in their missions. For instance, if a trainee is uncertain whether the "enemy" is holding defences or is going to attack, he must thoroughly assess the situation, and this will require him to show resolution. The trainee will experience even more strain if he has to deal with emergency situations. To divert an imminent threat and to find the way out of a critical situation, he must show flexible thinking, self-possession and composure.

The time factor also has its impact on the man's will. The fact that he has to act in conditions limiting his time develops his poise and helps him to avoid being nervous or in a hurry and also to retain lucidity of reasoning, which is indispensable for displaying initiative.

To discharge military duties is a strenuous matter requiring an original approach to one's tasks. If a man shows initiative in his daily work, he will no doubt display it also on the battlefield.

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GROUND FORCES

SELF-PROPELLED WEAPONS DESCRIBED

Moscow SOVIET MILITARY REVIEW in English No 1, Jan 81 pp 38-40

[Article, published under the heading "Weapons and Equipment," by Col Eng V. Botin: "Self-Propelled Weapons"]

[Text]

Self-propelled weapons may be armoured, semi-armoured (open on top and stern) or open, with a rotatable or fixed turret, or with a turret rotatable in a limited sector.

The idea of making artillery systems self-propelled arose a long time ago. Even before the First World War (1914-18) 76-mm antiaircraft automotive guns and cannon-machine gun carrying vehicles were designed in Russia and later appeared on the battlefields. They were artillery systems mounted on truck or caterpillar tractor chassis and intended for infantry direct support and fighting enemy airplanes and tanks.

In 1923 Soviet engineer P. V. Koroteyev designed the first self-propelled battalion gun which provided a basis for the theoretical, experimental and design work aimed at creating Soviet self-propelled artillery. This gun was handled by one man, its road speed was 5 km/h, engine power 10 h. p. and weight 500 kg.

In 1925 work was started to design a 76-mm special caterpillar-mounted regimental self-propelled gun. In the early 30s SP guns for various purposes were made on the basis of serially-produced T-26, T-28 and T-35 tanks. The heaviest systems were mounted on special running gear. Specialists sought to standardise the weapons to the maximum degree, i. e. to use the chassis of one tank for different calibre guns.

1939 saw the appearance of the SU-14-Br2 SP gun, having a closed fighting compartment, armed with a 152-mm gun, weighing 65 tons and moving at 25 km/h, and the SU-100U gun mounted on the

T-100 heavy tank chassis. These systems were used during the Great Patriotic War in the fighting at Moscow in late 1941 and early 1942.

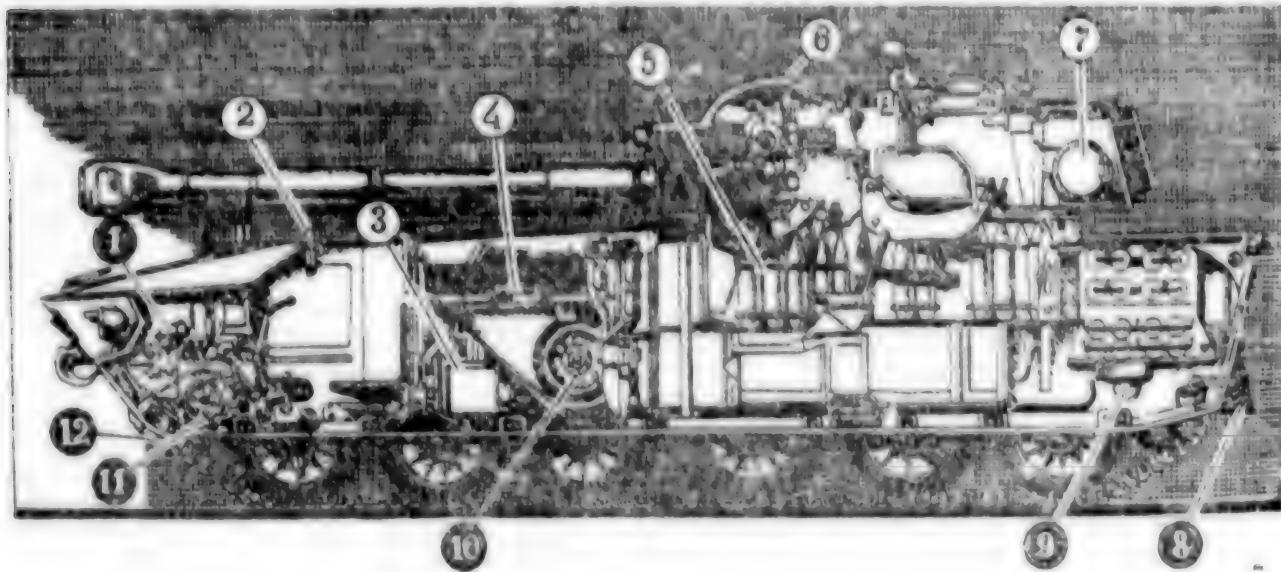
By 1940 the USSR had designed and produced in small batches twelve standardised self-propelled artillery systems for various purposes, many of which were original in design and excelled their foreign counterparts in combat characteristics, primarily armament and manoeuvrability.

Germany used outdated light tanks as the basis for SPGs; in 1924-28 France produced a small number of SPGs; and the USA had no SP artillery at all until 1939.

Soviet self-propelled artillery was used with the best results during the Great Patriotic War. In the autumn of 1942 tank builders and artillery designers were assigned the mission to develop new SPGs on the basis of light, medium and heavy tanks, to be used as weapons of immediate tank and infantry support on the battlefield and for fighting enemy tanks. In late 1942 the country developed the production of the semi-armoured SU-76 system armed with the 1942 76-mm gun and the armoured SU-122 mount provided with a 122-mm howitzer. Among the four SP systems produced in 1943 the SU-152 gun and the ISU-152 assault gun were the most efficient weapons of the Second World War.

Soviet self-propelled artillery of the war years was characterised by the use of new T-34, KV and JS tank and the most powerful artillery weapons. The SPG generally had a higher calibre than the corresponding tank. Whereas the T-34 tank was

1 — pneumatic system; 2 — vision devices; 3 — engine heating system; 4 — engine and main drive lubrication system; 5 — ammunition set; 6 — sight; 7 — filtering and ventilation unit; 8 — hydraulic equipment; 9 — hydraulic shock absorber; 10 — cooling system casing; 11 — main drive; 12 — driving wheel



armed with a 76-mm gun, the SPG mounted on its chassis carried an 85-mm gun. The provision of the T-34 with an 85-mm gun allowed the corresponding SU-100 SPG to be armed with a 100-mm gun. The heavy JS tank was provided first with an 85-mm and then with a 122-mm gun, and the SPGs created on its basis were armed with a 122-mm and a 152-mm gun respectively. From 1941 to 1945 the Soviet Armed Forces received a total of over 21,000 SPGs.

Self-propelled weapons developed during the war years were distinguished for their high combat characteristics: e. g. their elevation range was $-3\text{--}5^\circ$ to $+20\text{--}25^\circ$, angle of train within $10\text{--}30^\circ$, maximum road speed 35-55 km/h, and their crew included 4-5 members. All guns except SU-76 had a special anti-shell armour protection. Designers paid special attention to reduction of recoil, rational arrangement of ammunition and to ensuring maximum convenience for the crew. As regards armour protection, armament and mobility, they were superior to the corresponding German guns.

In the postwar period the developed capitalist countries began to pay increased attention to developing self-propelled weapons. Specialists believed that SPGs had a number of advantages

compared with towed guns: they were better protected against enemy fire, were capable of continuously supporting tanks and motorised infantry on the battlefield, took less time to get ready for battle and, being smaller in size, had smaller crews.

Military specialists distinguish three stages in the development of self-propelled weapons. At the first stage (WWII) they were commonly mounted on tank chassis, their fighting compartment was of the open, semi-closed or closed type with anti-bullet and anti-shell armour protection. The guns had a small angle of train and rate of fire, were manually loaded and required much time to be prepared for battle.

At the second stage (early 50s) SPGs were also designed on the basis of tanks, but with the experience of WWII and the Korean war duly taken into account. The majority had closed or semi-closed fighting compartments with anti-bullet armour protection, and were not inferior to tanks as regards mobility and cross-country ability. They were provided with modernised counter-recoil mechanisms which considerably reduced recoil, took less time to get ready for battle, were mechanically loaded, had angles of train as great as $60\text{--}120^\circ$ and were provided with a radio and an intercom system.

At the third stage, which began in the 60s for most SPGs use was made of the APC chassis or a special caterpillar running gear, special attention being concentrated on enhancing mobility and fire manoeuvrability, protection against mass destruction weapons, reduction of weight and size, ensuring buoyancy and air mobility and increasing endurance. Medium calibre guns are now mounted in turrets allowing all-round fire. To increase the rate of fire, certain models are provided with automatic loading devices.

The high demands made on self-propelled artillery urge its constant modernisation which, according to foreign military specialists, should involve higher range and rate of fire and manoeuvrability, better accuracy of fire, performance characteristics and survivability, and automation of the processes of firing data preparation and fire control.

The Soviet 122-mm SP howitzer (see Fig.) is notable for its high performance and combat characteristics. It is a light armoured caterpillar artillery system capable of delivering all-round fire and intended for destroying and neutralising enemy manpower both in the open and under field type shelters, and for fighting enemy artillery, tanks and APCs.

The watertight armoured steel hull makes it possible to negotiate water barriers. In the middle it is divided into two parts by a water-tight bulkhead, the front portion housing the engine compartment and the remaining space, including the turret, forming the fighting compartment.

The hull carries a powerful power plant enabling SPGs to quickly change fire positions and attain a speed of up to 60 km/h on concrete (asphalt) highways and up to 4.5 km/h when afloat. The vehicle weighs 16 tons, has a reliable running gear, its specific ground pressure is 0.5 kg/cm² and it has high cross-country ability, easily negotiating natural and artificial obstacles. The vehicle's endurance is 500 km.

To negotiate water barriers afloat, the SPG chassis is equipped with detachable propeller gratings, anti-surge vane, radiator guard and other devices.

The fighting compartment houses an armament system comprising a howitzer with ammunition, and gun-leying, vision and other devices to en-

sure successful fulfilment of fire missions. The crew's workplaces are also located in the fighting compartment. The howitzer ammunition includes high explosive fragmentation shells (weighing nearly 33 kg), hollow-charge, smoke, illuminating and propaganda projectiles.

The howitzer (range of fire 1,500 m, point-blank range 780 m, practicable rate of fire 4-5 rounds per minute) is mounted on a turret rotatable through 360°. Rotation is effected by an electric drive in the event of rough laying for direction and by manual drive for fine laying. Screwed on the barrel is a muzzle brake to absorb the recoil energy when the howitzer is fired. The middle of the barrel is provided with an ejector to blow out the barrel and clean the firing chamber of powder gases after firing. The breech accommodates a vertical wedge breechblock. To facilitate operation during firing, the howitzer is provided with a shell and cartridge rammer.

The periscopic sight makes it possible to deliver both direct and indirect fire.

The fighting compartment electrical equipment is a set of devices to control actuating mechanisms, blocking, light signalling and illumination.

Internal communication between the crew members is effected through the intercom system and external communication through a two-way radio.

The gunner and the battery commander (senior officer of the battery) can maintain communication by telephone.

To clean outside air and to build up extra pressure in the fighting and driving compartments, the vehicle is provided with a filtering and ventilation unit, which can operate in the filtering mode (when crossing contaminated areas) and in the ventilation mode (during firing and on the march). In the former case extra pressure is build up in both compartments. To expel powder gases from the fighting compartment, provision is made for a ventilation system.

Self-propelled artillery weapons (guns, howitzers, anti-aircraft and other artillery systems) on special self-propelled mounts or on APC or tank chassis are reliable means for fighting enemy tanks, artillery and manpower, as accompanying fire, for troop support on the battlefield and for protecting troops against enemy air attacks.

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GROUND FORCES

MARITIME OPERATIONS. RATES OF ADVANCE

Moscow SOVIET MILITARY REVIEW in English No 1, Jan 81 pp 41

[Article, published under the heading "Military History," by Col. N. Frolov, Cand. Sc. (History). "Rates of Advance"]

[Text] In contemporary conditions the rate of advance of forces plays an exceptional role. The success of an operation [battle] largely depends on it. This article deals with the experience of the Soviet troops in achieving high rates of advance during the Great Patriotic War [1941-45].

WHEN negotiating organised defences, high rates of advance favoured surprise actions and maintenance of initiative in battle. The enemy in defence frequently did not have time to carry out measures for weakening or frustrating the blows of the advancing Soviet forces.

Rapid and continuous advance made it possible to shift the main effort quickly to the operational depth. A breakthrough of the first and second defensive zones led to a breaking up of the entire enemy defence system and created advantageous conditions for committing reserves [second echelons] to battle and developing a tactical success into an operational one. Subsequent non-stop movement of the advancing troops secured successful assault crossing of water barriers, capture of lines echeloned in depth and important objectives on the move and also defeat of enemy reserves piecemeal during their advance and location in the concentration areas.

The Great Patriotic War provided numerous examples of offensives at high rates. One of them was the actions of the 5th Tank Army of the South-Western Front in the counteroffensive at Stalingrad (November 1942). Its mission was, after the breakthrough of the enemy defences by the infantry divisions, to commit through the gap the tank corps, and in cooperation with the 21st Army to surround and destroy the main body of the enemy grouping holding defence on the line of the inhabited localities of Bolshoi and Kletskaya. Then, pressing home the attack in the general direction of Kelench on the third day of the opera-

tion to link up with the forces of the Stalingrad Front from the opposite direction and to complete the encirclement of the entire Stalingrad enemy grouping.

The advance of the 5th Tank Army began at 0850 hrs on November 19. As the Soviet forces moved forward enemy resistance increased, and the rate of the infantry advance decreased. The army commander decided then to commit the tank corps to action without waiting for the breakthrough of the enemy defences.

At 0900 hrs the tank corps began to advance from the waiting areas 15-20 km from the forward edge. At 1100 hrs they reached the line of operations of the army's main forces. By 1400 hrs the tanks overtook the infantry and pressing home the attack reached the area of Klenovaya where the main artillery positions of the enemy were located. The blow was so unexpected for the enemy that several of his batteries did not manage to fire a single shot. This battle ended in the utter rout of the Hitlerites. Their defences were broken through to the entire depth in this direction. Despite difficult terrain conditions and snowfall by the end of the day the tank formations had advanced to a depth of up to 20 km. On their way they had destroyed withdrawing units and separate pockets of resistance.

On November 20 the main body of the army repulsed a counterblow by the enemy operational reserves (the 48th enemy Tank Corps) whose resistance was broken in the second half of the day.

Subsequent operations of the 5th Tank Army bore the character of a rapid pursuit of the enemy.

On November 21, in a meeting engagement the 26th Tank Corps routed the enemy 3rd Motorised Division and hurled it back to the Don. On the night of November 21, the advanced detachment of the corps captured a crossing over the Don in the area of Berezovsky (north of Kalač) by a surprise blow and held it until the arrival of the main forces. This success was exploited by the 4th Tank Corps (mobile group of the 21st Army). Using the captured bridge across the Don, on the night of November 23, it crossed to the eastern bank of the river and reached the area of Sovetsky, where it linked up with the 4th Mechanised Corps of the Stalingrad Front. In four days the forces of the 5th Tank Army advanced 140 km.

The most important condition for achieving high rates of advance was a rapid breakthrough of the tactical zone of the enemy defences. Such was the case in the Jassy-Kishinev operation (August 1944) when the 27th Army of the 2nd Ukrainian Front broke through the entire depth at the very first day of the offensive. Advancing in the zone 21 km wide, the army concentrated its main effort on a breakthrough sector of 8 km. Its mission for the first day of the operation was to break through the tactical zone of the enemy defences and cover the commitment of the 6th Tank Army through the gap.

At 0740 hrs on August 20, the forces of the army attacked the enemy FEBA. The tactical defence zone was broken through in five hours. Powerful blows by the artillery, tanks and aviation made gaps in the enemy defence through its entire depth. The effort during the breakthrough was built up by commitment to battle of the second echelons of regiments and the reserves of divisions. While fighting was still in progress for the main zone advanced detachments were sent from the divisions of the first echelon to capture crossings over the Bakhlu River. Using the gaps in the enemy battle formations they reached the river, crossed it and captured bridgeheads. Simultaneously the 27th Guards Tank Brigade captured by a rapid blow a bridge in the Khoineshty area over which all tanks and self-propelled guns of the army crossed the river. At 1115 hrs the 6th Tank Army began to advance to the river Bakhlu in readiness to be committed through the gap.

The next three days the average rate of the offensive of the 27th Army was 20 km a day. The units of the 6th Tank Army advanced even more rapidly. On some days their advance exceeded 50 km. Successful actions of the 27th and 6th Tank

armies played a decisive role in encircling the Jassy-Kishinev enemy grouping.

High rates of advance were shown by the Soviet forces in the Vistula-Oder operation (January-February 1945). During this operation tank armies and separate tank corps were the main factor in pressing home the attack. They represented as it were, an armoured ram of enormous power which, advancing in front of the combined-arms armies, cleared a way for them to advance at a high rate. Their rapid penetration disrupted control and disorganised the enemy. As a result, conditions were created for his encirclement, capture and piecemeal destruction.

Having reached operational space the tank armies and corps with active air support started to pursue the enemy. The pursuit was carried out continuously day and night. By powerful blows they cut up the enemy groupings, reached their communication routes, captured crossings and road junctions. The retreating troops of the enemy 9th Army were overrun and could not hold any of the previously organised defences in the rear. Relentlessly pursuing the enemy the Soviet forces did not give him any time for planned withdrawal and consolidation. The forces of the front usually breached the enemy defence lines on the move and destroyed piecemeal the enemy reserves brought up and committed to action by parts.

The pursuit of the Nazi troops was carried out on a broad front. Tank armies operated in some directions on a frontage up to 50 km; corps, along one or two routes in zones of 10-15 km, with advanced detachments at a distance of 30-50 km. The main forces, as a rule, moved in march columns and deployed into battle order only when necessary. In order not to reduce the rates of advance and to ensure refuelling of vehicles and rest of the personnel, the brigades operating as advanced detachments were regularly replaced. The same picture was observed in respect of battalions in brigades.

Rapid and initiative actions of the advanced detachments played a decisive role in pursuit. They courageously penetrated between withdrawing enemy columns, reached their withdrawal routes, skillfully manoeuvred and defeated the enemy by resolute blows at flank and rear on the move. When they met superior enemy forces, the advanced detachments did not engage them but bypassed them and continued to press home

the attack in the depth. If a turning movement was impossible they pinned the enemy down and secured freedom of manoeuvre for the friendly main forces. The advanced detachment's deep penetration into the enemy's rear did not allow him to use the previously prepared defence lines.

During the Vistula-Oder operation the Soviet forces advanced as deep as 500 km. The infantry formations advanced at a rate of up to 45 km and tank (mechanised) formations up to 70 km a day. The distance between the tank armies and corps and the all-arms formations reached 100 km.

Advanced detachments also acted energetically during the rout of the Kwantung Army by the Soviet forces in the Far East in August 1945. They were organised almost in all divisions and corps of the armies' first echelons. An advanced detachment comprised from a tank battalion to a tank brigade, from several companies to an infantry regiment on motor vehicles, an artillery battalion, antitank and antiaircraft battalions and other support subunits. The rate of advance was 100-150 km a day. The sudden appearance of advanced detachments took the Japanese units and garrisons by surprise and foiled enemy attempts to offer organised resistance.

Thus, experience conclusively proves that a complete defeat of the enemy is achieved only

by a decisive offensive carried out at a high rate and in great depth.

Securing a high rate of advance depends on a number of mutually connected factors. The troops' morale, their mobility, training level, state of weapons and materiel in the first place, are among these factors. Of particular importance is the ability of the command personnel to make full use of the combat qualities of their forces and to put into practice methods of actions most suitable at the time.

Achievement of high rates of advance in modern conditions has still greater significance. The character of combat missions, wide use of the most modern weapons, the rapid and sharp changes in the situation, the intensity and bitterness of combat actions and their increased scope all demand a rapid advance.

Absence of continuous front lines, wide use of airborne troops, the depth of firing at the enemy, use of strong groupings of tank troops are factors contributing to a rapid advance. One of the main conditions for higher rates of advance is an increase of forces' mobility, elaboration and practical mastering of methods of combat actions which ensure the most effective use of manpower and equipment for achieving the planned objectives in the shortest time.

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AIR DEFENSE FORCES

REGIMENT COMMANDER'S ACTIVITIES DESCRIBED

Moscow SOVIET MILITARY REVIEW in English No 1, Jan 81 pp 14-16

[Article by Maj G. Belostotskiy: "Regimental Commander"]

[Text]

THE minutes of waiting for "battle" are always wearisome. Especially for missilemen. Such is their service: always waiting and ready at any moment for battle, ready to act quickly, resolutely and with precision. Colonel Vladimir Litvinenko, commander of an antiaircraft missile regiment, has realised this during his service in the armed forces. He has also learned to concentrate on the task before him when action is impending. Being at the CP now he glanced at the dials and the men present. The pale yellow light of the screen slightly illuminated the men's calm, passive faces. What were they thinking about? Probably the same thing as himself, commander, the forthcoming combat firing exercises, which were to end here on the firing grounds. So far everything had gone well. Now there was only the final examination.

When the loud-speaker gave out the target data to the CP the room seemed to come to life. The operators became alert now that the decisive moment had arrived, they had eyes only for the screens. The other men in the team turned to the plotting boards. Colonel Litvinenko watched with pleasure his men's prompt actions, noting to himself their inner discipline and understanding of their responsibility for the outcome of the missile launching.

The target appeared at a maximum low ceiling. Soon it would be too late to fire at it. Not even the slightest delay could be allowed. And with lightning speed the operators caught the target and began to track it. Almost simultaneously with their report Colonel Litvinenko gave the order:

"Number one — fire!"

The operators were the first to know the result of the firing: the screens showed two whitish dots converging—one representing the radio-guided target, the other the missile fired at it. Restrained exclamations of joy were heard in the cabin. The regimental commander smiled with

satisfaction as he imagined the target blown to smithereens...

After a while the official result became known—"excellent." Of course, the regimental commander had not expected anything else. For several years now his unit is considered excellent—one of the best air-defence units in the Order of Lenin Moscow Military District. The missilemen always receive "excellent" marks for firing.

Vladimir Litvinenko will never forget his first steps as regimental commander seven years ago. The men were reconsidering their socialist emulation obligations and undertaking new, increased ones. It was important to keep up their enthusiasm and direct their energy to achieving the preset goal—to make the unit an excellent one. What was needed was hard work—painsstaking, coordinated and organised work of commanders, political workers and the Party and Komsomol organisations. Litvinenko realised that much depended on him, the regimental commander.

A thirty-six-year-old officer invested with such great trust, faced many serious problems at that time. In the first place: how to direct this complex team of men of different characters when he had only a very general idea of their work, since he had never before had anything to do with the type of equipment the unit was operating. There was only one answer: to learn about the weaponry which was new to him, to get to know it not only during service hours, but also in the evenings and days off too, and in his personal contacts with officers and soldiers. When the young regimental commander asked specialists to explain to him in detail the procedure and meaning of the operations they carried out he did not think this would be prejudicial to his authority. With a kind smile he would warn those he was talking to that now he was asking for information, learning from them, but that in a month or two he would be examining them and checking their know-how.

The excellent general theoretical training he had received at military school and the academy helped Litvinenko to grasp explanations quickly and understand easily enough what the technical description of the apparatuses and the electronic systems meant. After some time he was already quite familiar with the particulars of the work of the equipment, could tune it in, check the parameters.

Having mastered one device, Litvinenko turned to the next one. Under the very eyes of his subordinates he got to know the intricate equipment. The persistence and diligence of their communist leader astonished and delighted them, prompting them to improve their skill with the same zeal and to be conscientious about fulfilling their military duty.

Weapons and equipment were not the only objects of his study. Ever since his appointment as a lieutenant Litvinenko had felt an inner necessity to constantly broaden his mental outlook, to be well informed about the latest research in the field of sociology, to get to understand problems of economics, achievements in science, engineering and military scientific thought. This necessity became more imperative with new appointment to a high command post. And he profited by every opportunity to learn something new, to increase his knowledge. To be able to convince people, to guide them competently, scientifically, a commander himself must know a lot.

At the beginning the young commander could not avoid certain mistakes in his work. Sometimes, in his concern for common cause, he would do the work for his subordinates or be too easy going. This was once pointed out to him by his deputy for political affairs. He did not agree at once with the political worker's remark and countered it with his own arguments, which seemed to him no less convincing. But when he thought them over by himself he understood that it was not he but his deputy who was right. He had to improve his method of work.

Time and again, later, Colonel Litvinenko noticed similar mistakes in the style of work of some young subunit commanders. He would have talks with such officers, share his experience with them and give useful advice and recommendations.

The regimental commander carries out extensive individual educational work with the servicemen, and often in presence of the immediate commander of the soldier in question. Young officers thus receive a visual lesson on how to educate their subordinates.

Colonel Litvinenko enjoys the respect of all in the regiment. He is liked for his impartial exactingness and concern for the subordinates, his tactful attitude towards them. He tries above all to see in each man an individual person. Soldiers and officers often go to him for an

answer to questions that worry them and always find a sympathetic response. Litvinenko has a special note-book in which he sets down critical remarks and proposals made by servicemen in private conversations, and at Party and Komsomol meetings and promptly takes the necessary measures. He supports and approves reasonable initiatives and creative thought in every possible way.

Captain V. Kataitsev came out with an important initiative. He proposed a variant of an accelerated re-equipment of the teaching and material base. This idea was discussed at an officers' meeting on Colonel Litvinenko's proposal. As a result, a precise programme for putting it into practice was worked out. Captain Kataitsev was given assistants and provided with the necessary material. This support inspired him: he worked out a whole complex of devices which help the members of a team to learn the most intricate operations.

Colonel Litvinenko engages a lot in political and educational work, heads one of the regiment's officer groups studying Marxism-Leninism, and makes reports at Party and Komsomol meetings. The information he gives on various questions arouses deep interest of the missilemen.

For instance, Colonel Litvinenko's report on the Soviet people's successful fulfilment of the Tenth Five-Year-Plan programme was listened to with especial attention. Basing his report on vivid facts and comparisons he drew a convincing picture of the grandiose transformations which took place in the country during the past years. The colonel's personal impressions added considerable credibility to the talk. Litvinenko had just returned from a journey during his leave to the Sumy Region, where he had lived in the days of his childhood and youth. Another important thing was that he succeeded in linking up with the Soviet people's successes in the communist construction the tasks of the servicemen, as defenders of the country's creative labour.

The regimental commander's personal participation in political and educational work brings him closer to his subordinates and contributes to further strengthening mutual faith and esteem.

These days the efforts of the regiment are directed at comprehensive fulfilment of the socialist obligations adopted in honour of the 26th Congress of the Communist Party. All the men have one and the same aim — to keep the title of an excellent regiment. Colonel Litvinenko believes in their success. The founded confidence of the commander and Communist, a bearer of the "For Service to the Motherland in the USSR Armed Forces" Order, 2nd and 3rd Class, and the "For Distinguished Services" medal — is taken up by the officers and soldiers of the regiment and inspires them to solve their everyday tasks successfully.

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NAVAL FORCES

BASIC DUTIES OF SEAMEN ON WATCH

Moscow SOVIET MILITARY REVIEW in English No 1, Jan 80 pp 26-27

[Article, under the heading "Combat Training", by Capt 1st rank V. Germanovich:
"A Special Kind of Duty"]

(Text)

Darkness fell over the choppy sea. It was dark too in the radar room of the escort flagship. Only an evenly rotating scanning strip and the bright target blips illuminated by it could be seen on the plan-position indicator. There were many such bright spots on the screen, for numerous fishing smacks were scurrying all over the harbour where the convoy lay.

In this complicated navigational and weather situation the watch radiometer operator closely observed the screen and supplied target coordinates to the plotter.

Several new targets suddenly appeared on the screen. They were moving slowly, at irregular intervals and course angles. They appeared to be fishing boats too.

But it did not escape the watch radiometer operator's attention that the craft did not appear on the fairway, but seemed to emerge from under the shore. Suspicions grew when the plotters reported that the targets were moving not in the direction of the port but towards the sector where transport ships with a landing force were anchored, bypassing the escort ships.

The watch radiometer operator gave the alarm signal without delay.

The targets detected turned out to be "enemy" torpedo boats. "Fire" at the boats was opened in good time, thereby preventing them from approaching the torpedo launching line.

During the critique of the exercise the commanding officer of the group of "enemy" ships said that he had been sure of success owing to the bad visibility, low speed and simulation of fishing boats. And yet the attack was frustrated. The proficient and vigilant watch keeping by the flagship radiometer operator allowed the convoy to detect the "enemy" in a complicated situation and take the necessary steps to repulse the attack.

What, then, is a watch and how does it differ from ordinary duty? What basic demands are made on starshines and seamen on watch?

A watch is a special kind of duty on naval ships. It is organised when there is need for constant high vigilance and presence of the watchmen at the designated post.

Keeping watch on a ship ensures instant combat readiness of action stations and command posts as regards steering the ship, observation, and combat use of weapons and equipment.

On the high seas, with the ship underway, watch is kept at all functioning instruments and mechanisms and those in a condition of combat readiness, and also by weapons. This is really the principal distinguishing feature of a watch. While the duty helmsman may be in the wheel-house, pilot room or at the gyro post, the watch helmsman can be only at the helm. Likewise, the duty mechanic detailed to maintain order and watch the condition of the machinery may occupy a post either at the power and damage control station or at other action stations. He may even take a rest, if granted the permission of the engineering department duty officer. The watch mechanic, on the other hand, must be constantly near the operating engine, keep an eye on the performance of mechanisms and ensure their uninterrupted and trouble-free functioning.

The main demand on watch is constant vigilance, attentiveness and readiness to execute immediately any command or order of the commander, to react properly to even the slightest change in the situation and take a timely and correct decision.

During cruises it often happens that success of a battle, attack or manoeuvre largely depends on the actions of individual sailors. In the case cited above, for example, the "enemy" torpedo boats were detected by the watch radiometer operator. Had his attention been distracted even for a moment, the outcome of the "battle" might have been quite different.

The watch sonarman, for instance, is one of the main persons as regards detecting the enemy. Success of battle depends largely on his vigilance. Victory in a battle of two submarines attends the first to detect and attack the enemy.

A watch on a ship is organised not only for manning the command posts and action stations, but also

for protecting the ship and its material when a guard is not detailed for the purpose.

Armed watchmen are usually posted by the gangways, at berths and piers, on flood gates (when the ship is in dock) and on the ice near the ship in winter. The number of posts and the time they are to be manned are determined by the ship's CO. These watches also call for constant vigilance, and the watchmen are not allowed to leave their post for a single moment. Ensuring the ship's safety, they enhance its combat readiness.

Once, when a group of Soviet ships was in a foreign port on a visit, a nearby tank truck carrying fuel caught fire. Starshina 1st Class V. Beskrovny, the watchman, saw the fire, immediately raised the alarm and rushed to the burning vehicle. The flames burned his face and hands, but he continued to fight the fire, realising that an explosion could damage the ship. The quick, courageous and selfless actions of this sailor and of the crew, who promptly came to his assistance made it possible to liquidate the fire, thus saving great material values.

For courage and resolute actions in a complicated situation Starshina 1st Class V. Beskrovny was awarded the Order of the Red Banner and promoted.

Watch keeping often takes place in unusual, often complicated conditions, e.g. rolling and pitching, squally wind, limited visibility, cold or heat, etc. Such conditions require the watchmen to display endurance and all-round physical, moral and psychological steeling. Monotonous conditions during a watch, the necessity to be constantly present at one's post, limited mobility, emotional strain due to high vigilance and attentiveness impair one's physical condition and capacity for work.

Therefore, as distinguished from round-the-clock duty, the duration

of a watch is normally four hours. On the CO's decision it may be reduced to one hour, depending on the situation. As a rule, the duration of a watch at the helm and observation posts is two hours. In some cases, however, it may be increased to six hours.

Seamen's training for keeping watch and their combat and professional training level must ensure the watchman's constant readiness for correct and resolute actions in any situation.

However, success and efficiency in keeping watch depend not only on high vigilance, attentiveness and adequate physical and psychological steeling, but also on the watchman's knowledge of weapons and equipment, relevant maintenance instructions and duties prescribed by the established schedules.

Nowadays a watch is inconceivable without a high professional level and nearly automatic actions. Take the sonarman, for example. The sea is full of different noises. The majority of fishes, mammals and invertebrates are capable of producing noises over a wide frequency range. Large mammals have their particular "voices," sometimes resembling the rhythmic noise of the propeller. The watch sonarman must therefore be highly proficient and possess a profound knowledge of the components of surrounding noises in order to be able to distinguish all these sounds from the noises produced by ships.

During the Great Patriotic War (1941-45) it happened more than once that submarine commanders took such noises for approaching enemy submarines. But the enemy turned out to be a whale or a school of dolphins.

If the watch sonarman is not proficient enough and is not capable of quickly and correctly determining the origin of a noise, he will fail to fulfil the assigned mission in a modern fluid battle; moreover, he may endanger the entire crew.

NAVAL FORCES

SOVIET NAVY'S VISITS TO FOREIGN PORTS

Moscow SOVIET MILITARY REVIEW in English No 2, Feb 80 pp 5-6

[Article by Capt 1st Rank G. Savichev: "Flying the Flag of Friendship Over All the Oceans"]

[Text]

Every year ships of the Soviet Navy pay visits of friendship to various countries. Wherever they drop anchor the sailors demonstrate the noble features of Soviet people.

Some memories never fade. Many years have passed since a squadron of Soviet ships paid a visit to Cuba, but I still see in my mind's eye lovely Havana and the crowds of Cubans that came to welcome us in the harbour. The missile cruiser "Grozny," the big antisubmarine ship "Soobrazitelny," the guided-missile ship "Berdov," the floating base "Tobol" and two submarines slowly steamed past the heavily crowded embankment many kilometres long. The crews were lined up on deck and bands were playing. The crowds on shore broke out in cheers:

"Vivan Soviéticos!"

"Viva Cuba!"

We spent a week in Havana. We shall never forget our meeting with Fidel Castro Ruz, who visited the cruiser "Grozny" and had a talk with the crew. The *safra*—harvesting of sugar cane—was also an unforgettable event. The Soviet sailors took part in it. We had numerous meetings with the Cubans, cheerful people bursting with revolutionary enthusiasm. They said they were learning from us how to build socialism and taking over our experience. Soviet internationalism was an example for them.

During our visit to Havana I never dreamt that ten years later I would hear the same words on the other side of the Atlantic—in Angola. And although the visit of the antisubmarine cruiser "Minsk" was unofficial, there were many unforgettable meetings in Luanda between Soviet sailors and the people of that friendly country.

Once a Swedish paper wrote that Soviet sailors "conquered" other peoples with good manners, discipline and modesty, and not with weapons. We could add that they win the hearts of other peoples also with songs and dances. There was not a single visit when the crews of Soviet ships, or rather their amateur art ensembles, failed to give concerts to the people of the ports they put into. Amateur art ensembles, by the way, not professional performers, signalmen, missilemen, sonarmen—common sailors, generally speaking, who had learnt to perform songs and dances between watches. But they were a surprising success with the public. Audiences in France, Brazil, Peru and Ecuador invariably awarded them with stormy ovations.

When the training ship "Borodino" was on a visit to Mexico, the *Volna* amateur art ensemble

gave a concert in a park in Mexico-City. At first the audience was not very big. However, each item on the programme met with a warm welcome. The dances and folk songs sung in Spanish were especially popular. The public repeatedly asked for encores. By the time the concert was over the vast square in which it took place was literally packed with people. The Mexicans eagerly shook hands with the sailors and frankly expressed their admiration. The amateur performers were accompanied by grateful spectators to their bus. But while the concert was on the bus had been surrounded with cars. The Mexicans rolled up their sleeves and cleared the way for the Soviet bus. The sailors left the park to the stormy cheers of their new friends.

The antisubmarine cruiser "Minsk" was bound for the Mauritius area. V. Mikhailenko, an officer of the ship, had already visited Mauritius in the cruiser "Admiral Fokine." He was now sharing his impressions with those who had not been there. He said:

"The people of Port Louis, the capital of Mauritius, gave us a warm welcome. Wherever we went, they showed their friendliness. They had particularly warm memories of the crew of the cruiser 'Dmitry Pozharsky'."

"Why the crew of the 'Dmitry Pozharsky'?"

"The point is," Mikhailenko went on to say, "that they came to the aid of the Mauritians when they were in trouble. In February 1975 a tropical cyclone struck the island with all its destructive might. The hurricane snapped the pylons of the power transmission lines, as if they were matches, and tore the roofs off the buildings. When the

hurricane had subsided the people of Port Louis saw terrible destruction. The city had no power or water supply. The telephone was not working. The roads were blocked. In that hour of desperate need the sailors of the cruiser 'Dmitry Pozharsky' came to the Mauritians' aid. The ship was then at sea not far from the island. The command quickly formed teams and thoughtfully organised the work that had to be done. The teams worked for 12 days. They restored tens of kilometres of power transmission lines and telephone lines, opened up the roads and put the water supply system into service again. The sailors donated a lot of their blood to the country's public health service to help the injured. In a telegram to L. I. Brezhnev the people of the island said that they would never forget the disinterested aid the crew of the Soviet cruiser 'Dmitry Pozharsky' rendered repairing the damage done by that elemental calamity."

Whenever other Soviet ships visit the island the Mauritians extend a very warm welcome to their crews and treat the sailors as relatives. We received the same treatment during our last visit.

• • •

Soviet warships on ocean cruises make official and business visits to many foreign ports. Soviet sailors are worthy envoys of the USSR, and the people in foreign ports see for themselves that officers and men educated in an advanced socialist society are distinguished by political consciousness and high moral qualities.

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NAVAL FORCES

ACTION STATION DRILLS

MOSCOW SOVIET MILITARY REVIEW in English No 2, Feb 80 pp 27-28

[Article by Capt 1st Rank Eng M. Tsiporukha: "Action Station Drills"]

[Text]

There are two kinds of training for naval ship personnel—speciality and action station drills.

In the former case seamen and starshines perform the duties corresponding to their appointments. The training may consist in preparing the diesel-generator set for starting, the sonar system for operation or getting the set and the system ready for servicing. Speciality drills also include work of automatic AA gun layers on a special simulator. Normally men of the same speciality, e.g. mechanics, sonarmen, gunners, etc. work up their actions together. The training is conducted by sections or crews under the immediate commanders. The purpose of the training is to develop the personnel's practical skills in performing the servicing of weapons in accordance with the station bill. The training takes place under different conditions (darkness, with the ship listing or down by the bow or stern, flooding of compartments, fire, damaged weapons and equipment, etc.). This also helps to strengthen the men's will power, develop courage, staunchness, valour and other moral and psychological qualities.

During the Great Patriotic War the crews of Soviet naval ships carried out uninterrupted combat training in spite of the difficult and tense situations. Intervals between cruises were used to work up weapons and equipment control at action stations. The skills acquired proved to be of utmost use in battle. For example, one day in 1943

a group of boats and submarine chasers broke through to Tsemes-kaya Bay to land a force on the pier of the nazi-occupied port of Novorossiisk. When approaching the pier the submarine chaser under Senior Lieutenant Bazhenov sustained heavy damage. Its side was holed, as a result of which the galley and the bunk room were flooded. The ship was considerably down by the bow. The commanding officer ordered the landing party to go over to the stern to level out the ship. The subchaser managed to break through to the shore and land the force. Despite the damage, the ship manoeuvred under enemy fire and fired at the enemy gun emplacements. The well-trained crew staunchly fought the inflowing water, secured bulkheads, pumped out the water and repaired the damaged equipment while the ship was underway. The ship was saved owing to the crew's excellent professional level and selfless actions.

Action station drills are carried out by teams, which may include men of different specialities. According to the station bill, the gun and shell room team may include a mechanic, and the engine room team on a mine sweeper or guided-missile boat may comprise, besides mechanics, an electrician and a bilge engineer.

As a rule, the action station or command post commander conducts training in use of the action station equipment. An example of such training in the engine compartment is the switching over from one die-

self-generator set to the other. Training can take place under different conditions, e.g. when the ship is berthed or underway at sea, etc. The drills require a consistent and streamlined system in the training. First, a sequence of actions is worked up to be followed by practising quick execution in order to bring the performance up to the standard requirements. Finally, the personnel is trained in developing endurance, i.e. the ability to perform a given action as many times as required under complicated conditions.

Standard requirements are brought to the personnel's knowledge only after the sequence and scope of the operations have been worked up. Premature information is likely to cause haste and violation of the sequence of operations.

Transition from the simple to the complicated is an important training principle. In the beginning all actions of the team are worked up stage-wise in simple conditions. When the instructor is convinced that the trainees have mastered simple techniques, he passes over to more complicated ones or to working up the same simple elements in more difficult conditions, e.g. darkness, use of protective facilities, etc.

The relevant plan is drawn up for action station drill. It must contain the theme and the purpose of the training, as well as the list of operations, standards and narratives to be worked up. It must also specify the time of mastering each element and the day of training. This plan is approved by the department head or by the chief of the service.

This is how, for instance, the engine compartment personnel's drill on the theme "Securing Aft Bulkhead with Struts in the Event of Flooded Compartments" was carried out. Securing the bulkhead is the primary operation of all the

measures aimed at ensuring the ship's survivability.

The instructor had drawn up the plan of the drill, standard requirement time for installing one strut, securing the entire aft bulkhead with the aid of struts, introductory questions, and the list of safety measures to be taken during the drill.

The team's sequence and scope of operations to fit a strut onto the bulkhead were worked up with the ship docked. On a signal from the watch crew the action station personnel arrived in the engine compartment. The instructor informed the trainees of the theme and the training purpose. The crew's attention was drawn to the fact that flooding of the aft compartments would lead to stalling of the engines. Hence the personnel's task was to keep the water out of those compartments. It should be borne in mind that the aft bulkhead is constantly subjected to hydrostatic pressure, because the waterline runs below the compartment. In the event of flooding of the aft compartments the ship will sink deeper and the pressure will increase. If the bulkhead is deformed, it will give way under the water pressure, bulge out and burst. To avoid this, the bulkhead should be secured with adjustable metal and wooden struts, one strut being used for 2-4 square metres of bulkhead.

The instructor aided by an older seaman showed the crew how to fit a board at the required place on the bulkhead, the strut being dropped against the latter and fastened with wedges. The operation was performed by pairs of trainees, one after another. The rest of the personnel watched their comrades' actions. At the end of the training the instructor pointed out the mistakes made and demonstrated the correct way of handling the mallet when wedging the strut.

The drill ended in a critique during which the instructor drew attention to the shortcomings and

commended those who had distinguished themselves.

A combat bulletin issued at the end of the drill told about the results of the training and the resolute and competent actions of young mechanics.

The training conditions were gradually made more complicated. General and then emergency lighting was turned off in the compartments, the seamen working with the use of only portable emergency lamps. The efforts of the action station's commander and crew were not in vain. The personnel's high combat training standard was of great assistance at exercises and on long cruises.

Of great significance are also actions aimed at ensuring interchangeability of action stations. They are initially worked up with the ship anchored and then during a cruise. Interchangeability training is generally combined with servicing of the action station equipment by incomplete crews. Simultaneously, skills in rendering first aid to wounded and disabled seamen are practised.

The combat experience accumulated by the Soviet Navy during the Great Patriotic War and during present-day cruises has shown that the ships' crews must be ready to fulfil combat missions in the most difficult conditions. Proceeding from this, action station drills involving maintenance of the materiel with partial "damage" and "failure" of weapons and equipment, committing of reserve facilities to action, servicing of action stations in a storm and with the enemy resorting to radio jamming, switchover from automatic to manual control of weapons and equipment are held when the ship is underway at sea. Each training period of this kind is thoroughly prepared and practised first at base and then at sea. All safety measures are taken to prevent actual failure of the equipment or any other emergency situation likely to reduce the ship's combat readiness.

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CSO: 1812

NAVAL FORCES

DAMAGE CONTROL TRAINING

Moscow SOVIET MILITARY REVIEW in English No 2, Feb 80 pp 36-37

[Article by Capt 1st Rank S. Litvinov: "Damage Control on a Ship"]

[Text]

In a cold autumn morning in 1942 nazi aircraft appeared unexpectedly from behind clouds over the sea and attacked a patrol boat. The seamen met the enemy with cannon and machine-gun fire. The splashes of bullets, shells and bombs gradually drew closer around the ship. Glass on the bridge was smashed to smithereens, jagged holes appeared all over the deck and a fire broke out. One shell pierced the boat's side, mortally wounding the mechanic, while another hit the engines. As a result, the boat lost way and manoeuvrability. Nevertheless it continued fighting the enemy.

Overcoming the excruciating pain, the mechanic began stopping the holes with wooden plugs. The engineer, wounded in both legs, lay on the floor repairing the engine. The sailors lost no time in seizing fire-extinguishers and starting to put out the fire which was creeping up to the depth charges.

One of the bomb hit the boat's stern. The sailors spared no pains to control the damage, plugging numerous holes and making fast the dislodged aft bulkhead. The boat was saved and Soviet fighter planes which came to the seaman's rescue dispersed the enemy aircraft.

The Soviet seamen emerged victorious due to their high proficiency and heroic actions.

In fighting at sea a ship may sustain various damage. On cruises in complicated weather and navigational conditions it may catch fire or be holed. Its weapons may be put out of action.

The Soviet Navy has worked out a whole complex of damage control measures to be taken to ensure a ship's survivability and restoration of lost fighting efficiency. Russian and Soviet admirals and scientists made no small contribution to evolving methods and means for ensuring the ship's survivability. A wealth of experience in this field was accumulated in the battles of the Great Patriotic War and in the post-war period.

Along with the crew's excellent professional level and knowledge, the personnel's morale and readiness to discharge their service duty to the end play a great role in damage control. Naval commanders pay particular attention to the personnel's training in damage control operations on small ships, e.g. guided-missile, motor-torpedo boats, gunboats, seaward patrol and anti-submarine ships, landing craft and coastal mine sweepers. The small number of crew members and the specifics of their service make high demands on the proficiency of each seaman, starshina and officer. On small ships it is particularly impor-

tant to be able to use any means available to ensure the ship's survivability. The fate of the crew and of the ship itself on such craft, which usually operate at high speeds, often depends on the ability of each crew member to display high skill in any situation, show initiative and take competent decisions independently.

Damage control training is the most important component of the seamen's general combat training, its purpose being to enable the personnel to perform the necessary operations for ensuring the ship's survivability in any complicated situation, e.g. fire, darkness, smoke, steam or flooding. Naturally, success is inconceivable unless each crew member has a perfect knowledge of the ship's design, arrangement of the damage control facilities and the rules for using them.

First the personnel work up primary damage control measures, including fire and water fighting and eliminating damage and failures of weapons and equipment. Gradually, they go on to team-work within an action station. Damage control training takes place in situations closely resembling real ones.

The seamen work up their actions in a storm, in pressurised compartments and with protective clothing on. Simulation of really complicated situations at exercises always has a strong psychological impact on the trainees. This is particularly manifest when they have to take immediate and resolute action. Firm skills in damage control operations are acquired at lessons and exercises. The higher the personnel's damage control skills, the stronger will be their moral and psychological qualities enabling them to face any emergency.

The training of the officers occupies a prominent place in the general system of the personnel's damage control training. Group exercises, emergency drills and actions at command posts enable the officers

to master personnel control methods and damage control techniques. Not only officers, but also mates and stokers on duty participate in this kind of training, for the fate of the ship may depend on a competent decision taken at the first moment of an accident. Special emphasis is laid on ensuring combat readiness of the main control room and engineering department manoeuvring platform, i.e. the centres directing damage control.

In emergencies, control of the personnel scattered throughout the ship in different compartments can be exercised only by a competent well-trained officer, psychologically prepared for any critical situation.

To approximate exercises to situations likely to occur in warfare, wide use is made in the navy of various simulation facilities. This is done, however, after the personnel have learned to discharge their immediate duties at action stations and to take practical steps for ensuring the ship's survivability. In using these facilities, care should be taken to preclude actual damage and accidents. Fire and water fighting techniques are worked up at special combat training stations normally equipped on ships which have been written off. This allows simulation of big fires, unexpected effects and complicated narratives during routine training and exercises.

Different simulation facilities are also essential for training on active ships. To simulate hull damage, for instance, a detachable plate with typical damage is secured to a special shield.

Upper deck fires are simulated with the use of oakum or rags saturated with used oil or diesel fuel and placed in metal trays. Observance of the relevant safety measures allows the use of another training aid — a "fire source" — which is really a paraffin-impregnated wood-fibre plate with holes and grooves housing an igniter and an electric primer. The "fire source" burns for 10-15 minutes.

To imitate explosions on ships, smoke-puff charges are generally used, provided the volume of the room where they are set off is at least 40 m³. Smoke-puff charges must not be opened or used in premises where inflammable materials are kept; care should also be exercised to keep at a distance of at least 2-3 m from the set-off spot.

To imitate black-out, use is made of hand smoke grenades and smoke pots. One such grenade or pot is capable of blacking out a 75-100 m³ space, with a resulting visibility of one metre if standard illumination is used.

Damage control is the concern of each crew member — missileman, signalman, boatswain and mechanic alike. Every one must be ready to put out a fire, plug holes and repair damage. At action stations and command posts these operations are performed by the relevant crew members. In premises with no action stations or command posts, the ship's survivability is ensured by damage control parties of well-trained and experienced seamen and starshines of different specialities

(mechanics, electricians, engineers and divers) possessing perfect knowledge of all damage control methods and means and capable of working in the most complicated conditions.

Damage control demands a great deal of initiative on the part of the personnel. Having fulfilled his immediate duties, each crew member must help his comrade to speed up the repair of the damage. Success in damage control largely depends on efficient organisation and high moral and combat qualities and discipline.

To put out a raging fire, stem the inflow of water through a hole, quickly repair damage and proceed with the cruise are challenges which can be coped with only by selfless and efficient seamen. Post-war experience of combat training on ships has convincingly proved that properly organised damage control training of the personnel, excellent knowledge of weapons and equipment, their expertly handling, courage, resolve, firm ideological convictions and good team spirit have always been the main components of ships' fighting efficiency.

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LOGISTICAL SERVICES AND SPECIAL TROOPS

BATTALION LEVEL LOGISTICAL SUPPORT

Moscow SOVIET MILITARY REVIEW in English No 1, Jan 81 pp 24-26

[Article, published under the heading "Combat Training," by Col G. Ivanchenko: "Battalion Logistics in Defence"]

Text 1

Clothing, feeding and fueling the forces are all part of the diverse activities of logistic units. This entails a great variety of problems, some of which may seem unimportant such as providing buttons for men's overcoats while great skill is required for the solution of others, for instance, repairing sophisticated combat equipment or curing the wounded and sick. Logistical support plays an exceptionally important role in any battle including defence.

When on the defensive battalion logistic subunits are located at a somewhat greater distance from the forward edge than in an offensive. The tasks of providing material, technical and medical support to a battalion are carried out by its supply platoon (motor transport and administrative sections), a repair shop and a medical aid station.

These forces and facilities are deployed in tactical battalion logistic elements: ammunition point, fueling point, aid point and medical aid station.

BATTALION AMMUNITION POINT (BAP)

Organised on the basis of the motor transport section this element is intended to supply the battalion with ammunition (Sketch No. 1). The ammunition point is usually

headed by the supply platoon commander. Its mission is to receive armament, ammunition and ordnance supplied for the battalion, to organise their loading onto the battalion transport and to forward them to the companies.

When the armament has been received, it is immediately delivered to the subunits. Trucks carrying ammunition are accompanied by the company starshinas who receive the appropriate instruction from their commanders.

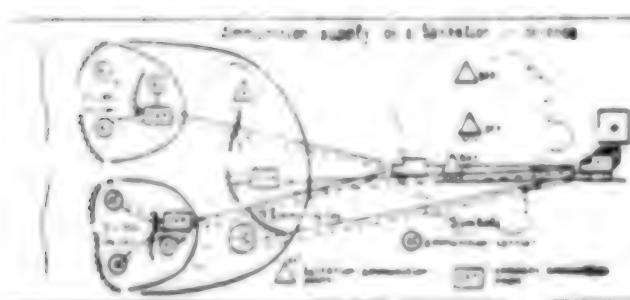
In a defensive action it is also advisable to establish company ammunition points which are supplied with ammunition by the motor transport of the battalion ammunition point. Depending on the situation the ammunition for the platoon fighting vehicles is brought either by transport or manually by ammunition carriers. This makes it possible to increase the volume of supplies transported and to decrease the possibility of vehicles being damaged by the enemy.

At the battalion ammunition point the ammunition stock is classified and kept on vehicles in order to deliver it to destination as quickly as possible. It may also be partially unloaded from the vehicles on the battalion commander's order if subunits build up additional stocks and, according to the regimental plan, battalion transport is to be used to forward the supplies.

The battalion ammunition point also collects unused ammunition including spent cartridge cases and charges, classifies and checks the latter for safety and then delivers them to the ordnance depo.

In addition, if manned by 2-3 soldiers the ammunition point may be used to load cartridge belts and magazines and to clean antitank shells of oil.

Sketch No. 1



BATTALION FUELLING POINT (BFP)

A fuelling point is also based on the supply platoon motor transport section (Sketch No. 2) and is headed by the section leader.

The battalion is supplied with fuel from the unit depot or directly from the superior unit depot. On the instruction of the deputy battalion commander for technical service fuel is received by the fuelling point officer and transferred to the battalion fuelling trucks or to the companies to fuel their fighting vehicles.

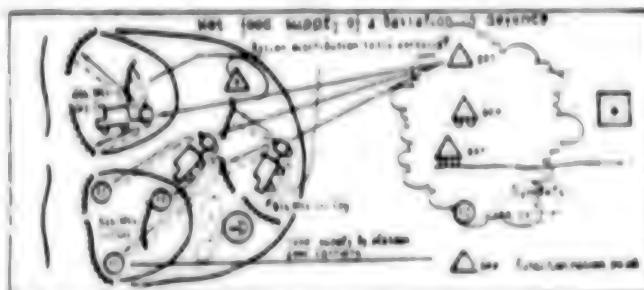
Fighting vehicles are fuelled on the spot in battle formation during lulls in the fighting and mainly at night, attention being devoted especially to fire prevention and camouflage.

If subunits are likely to withdraw to alternate positions or if there is a danger of encirclement, they must take measures to top up their vehicles with fuel. Whenever

air and ground observation, that it is located close to fuel and drinking water sources and is in good sanitary condition.

Measures are taken to provide the men with hot food three times a day. If this proves impossible, they are fed twice, the rest of the daily ration being given in the form of hard concentrated food.

Hot dishes are usually served to the men during lulls in the fighting. Field kitchens proceed to the company ration points, which must be located under cover and close to the subunit battle formations. If necessary, these

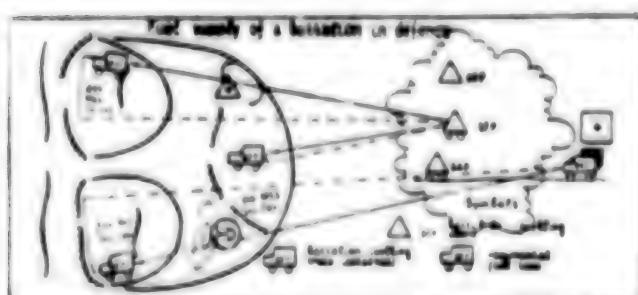


Sketch No. 3

kitchens are accompanied by road guides sent out by the company starshines.

If the situation makes it possible to locate the ration point close to the forward edge in a place with concealed approaches for the platoons, food may be served to the men in their mess fins.

In most cases food is distributed in vacuum containers by food carriers detailed from each platoon. Once a day company ration points are supplied with bread, sugar and cigarettes.



Sketch No. 2

possible, each vehicle is provided with a fuel reserve kept in containers. If necessary, barrels, cans or tanks of fuel are unloaded onto the ground.

BATTALION RATION POINT (BRP)

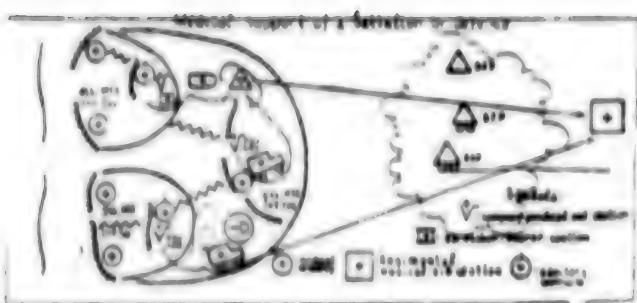
This is organised on the basis of the supply platoon administrative section (Sketch No. 3), the section leader being its chief.

A ration point is usually located under cover in a forest, ravines or in houses remaining intact. Field kitchens and motor vehicles are positioned depending on a tactical situation and the actions of the units to be supplied. However, when selecting a site to locate a ration point it is necessary to make sure that it affords good protection against enemy fire and reliable camouflage against

MEDICAL AID STATION

The provision of medical support depends on the conditions in which the defensive is assumed, on the battle formation, the degree to which the given area is provided with engineer works, the length of the stay in the given area and its sanitary conditions.

The medical aid station is usually set up in the battalion defence area. It is positioned in a standard shelter or simply under cover at a distance from the likely line of the enemy main attack or in the vicinity of the main evacuation route in an area of difficult access for enemy tanks (Sketch No. 4).



Sketch No. 4

A wide frontage and disposition in great depth make it necessary to provide medical support over a large area and sometimes on separate lines of advance, which inevitably involves great difficulties. To bring the sick and wounded to the medical aid station, an ambulance station is established near the first-echelon subunits. It has at its disposal small-size ambulance personnel carriers detailed from the regimental medical aid station or an ambulance car. It is organised, in the first place, for the companies located at a great distance from the battalion medical aid station.

When preparing for a defensive action medical equipment is replenished and sanitary and antiepidemic measures are taken to clean the territory. Besides, sanitary inspection is carried out to see that sanitary rules are obeyed, especially when dealing with food and water sources.

At a battalion medical aid station the sick and wounded are given the necessary medical aid in the ambulances and then sent to the regimental medical aid station. If ambulance transport is available, the casualties may be evacuated to the regimental medical aid station directly from the ambulance station.

Should the enemy penetrate the defence area, the chief of the battalion medical aid station may change evacuation routes by agreement with the regimental medical officer and send the wounded either to a neighbouring battalion medical aid station or to the regimental medical aid station.

If the battalion has to withdraw, measures are taken to hasten the evacuation of the wounded. For this purpose subunits use all their ambulance transport and other vehicles.

ORGANISATION OF LOGISTIC SUPPORT

The Bn CO's decision and instructions on organising logistic support form the basis of logistics control. The priorities of logistic operations depend on the mission assigned, the time available and the obtaining situation. However, in any case it is necessary to consider the avail-

ability of transport facilities and of such material supplies as ammunition, fuel and food. No well-grounded decision can be taken without overall appraisal of one's own capabilities and ascertaining the measures to be taken by the superior unit logistic troops.

At one tactical exercise high skill in providing logistic support was shown by Major Romadov, a Mts Inf Bn commander. On the "Rally" signal the battalion headed for the designated area and took up defensive positions assuming two-echelon formation. Its medical aid station was set up behind the first echelon, in a small ravine, the rest of its logistic elements being located behind the second echelon.

Acting in agreement with his deputy for logistics the Bn CO first sent the ammunition from the stock delivered by the regimental transport to the artillery positions and to the ammunition point of the second echelon company. The rest of the ammunition was delivered to the battalion ammunition point.

The ammunition supplied by the battalion transport to the ammunition points of the first echelon companies was then handed over to the platoon ammunition carriers.

By the end of the first day of "battle" regimental motor transport delivered fuel to the battalion fuelling point. Then it was partially transferred to the battalion fuelling vehicles, the remainder being supplied to the first-echelon company. Afterwards, mainly at night, fuelling vehicles refuelled all the battalion vehicles.

In his instructions on food supply Captain Pleskachyov, battalion chief of staff, specified both the subunits and the number of personnel to be serviced by each field kitchen, the time and priority of food delivery. The right-flank and second echelon companies were given food in mess tins while the left-flank company, whose defensive position had no concealed approaches to its battle formations, was supplied with food in vacuum containers delivered by food carriers.

The attached sanitary transport and the ambulance advanced closer to the company battle formations. During the exercise the Bn CO was given narratives in which the number of "wounded" was specified. The casualties of the first echelon companies were brought to the battalion medical aid station, where they were examined by a surgeon's assistant, given the necessary aid and then evacuated to the regimental medical aid station and those of the second echelon were brought directly to the regimental medical aid station.

The precise and skilful actions of the logistic specialists promoted success.

Now logistic units are provided with modern equipment which enables them to supply subunits quickly with fuel and ammunition, prepare meals quickly and render medical aid without delay. However, to realise these possibilities, logistics personnel must be well trained and skilfully controlled.

PERCEPTIONS, VIEWS, COMMENTS

YALTA CONFERENCE RESULTS REVIEWED

Moscow SOVIET MILITARY REVIEW in English No 1, Jan 80 pp 36-38

[Article, under the heading "Military History", by N. Glagolev, cand sci (History): "Historic Example of Cooperation (On the Occasion of the 35th Anniversary of the Yalta Conference)"]

[Text]

Thirty-five years ago, while the guns of the Second World War were still firing, the heads of state and government of the USSR, USA and Great Britain met at Yalta, a town on the Black Sea coast of the Crimea, to discuss postwar arrangements. The Yalta Conference held from February 4 to 11, 1945, was the culminating point in cooperation between the Big Three at the end of the war. Together with the Potsdam Conference held five months later (from July 17 to August 2, 1945) it laid the foundation for a sound postwar settlement in Europe. Its success convincingly showed that the doctrine of peaceful coexistence of states with different social systems was practicable and viable.

That was the Soviet Union's appraisal of the results of the Yalta Conference. However, in the West they were an object of vicious attacks after the war. In the USA the promoters of the cold war even produced the concept of a "betrayal at Yalta." Its purpose was to discredit the idea of cooperation between states belonging to different socio-economic systems. Only recently did an objective appraisals of the Yalta Conference begin to appear in the USA. D. Clemens, US political scientist, writes:

"In retrospect we see a diplomatic encounter in which all sides, not without misgivings and harsh words, struggled to achieve their aims, but an encounter in which they prized agreement by traditional negotiation as preferable to unilateral

action which might undermine international stability. Herein lies the meaning of the Yalta agreements, which provided an alternative to a 'Cold War.'"

Today international relations are witnessing intense struggle for consolidation and further development of détente. In this context the experience of cooperation between the great powers in the Second World War acquires especially great practical importance. What did the Yalta Conference show? What are its lessons?

The conference started with discussions on military questions. Franklin D. Roosevelt and Winston Churchill expressed profound gratitude to the Soviet Government for the offensive it had launched in January 1945 well in advance of the original plans. It proved to be a victorious offensive in the direction of Warsaw-Berlin, which eased the position of the Allied forces in the West after the enemy had penetrated their front in the Ardennes. J. V. Stalin remarked in reply that this was "living up to a comradely duty."

Then the leaders of the three powers examined political questions. In discussing the German question the leaders of the USA and Great Britain maintained that Germany should be dismembered. They regarded this measure as a most radical means for fighting their rival — German monopoly capital. However, the Soviet delegation did not approve of the Anglo-American proposal. It rejected the policy of revenge, national humili-

tion and oppression of the German people.

The participants in the conference decided to occupy Nazi Germany with Allied forces after its armed forces were routed. They made it clear that they demanded Germany's unconditional surrender. It was to be turned into a demilitarised, democratic and peace-loving state. The Allies declared that their unswerving aim was to destroy German militarism and nazism and to guarantee that Germany should never again be in a position to violate the peace of the whole world. At the negotiation table the question of the occupation zones in Germany for Allied forces was settled. R. Willis, an American historian, wrote in this connection that the British and Americans regarded the agreement on the zones as abdication on the part of the Russians, because everybody believed that by the end of the war the Red Army would reach the Rhine.

The documents of the Yalta Conference reveal that as its participants approached agreed decisions they were divided by differences which were sometimes quite substantial. For instance, such differences manifested themselves in the course of the discussions on the so-called "Polish question." The attempts of the Western Allies to force on the Polish people the Polish government in London failed. It was decided that the Allies would recognise the Provisional National Polish Government, provided it was reorganised.

The participants in the conference reached final agreement on the Soviet Union's entry into the war against Japan, the last of Nazi Germany's allies. The USSR was to open hostilities two-three months after the cessation of military operations in Europe. Numerous materials published in the West in later years show that the USA and Great Britain attached tremendous importance to this question. General Douglas MacArthur, Commander of the US Armed Forces in the Pacific, insisted with Washington to apply every effort to get Russia to enter the war against Japan before the American offensive.

H. Stimson, US Secretary of War, estimated that otherwise the American losses would run into a million officers and men. General MacArthur believed that to rout Japan at least 60 Soviet divisions would have to take part in the operations. In agreeing to enter the war against Japan the only aim the Soviet Union pursued was to hasten the end of the war, to cut losses and bring universal peace sooner.

The Yalta Conference adopted a decision on the creation of the United Nations Organisation (UN) and a Security Council as a permanent body

of the latter. It approved a "Declaration on Liberated Europe." In it the Allied powers announced their intention to coordinate their actions in the solution of the political and economic problems confronting liberated Europe. The governments of the Big Three recognised the need to eradicate the last remnants of fascism in the liberated countries and to create democratic institutions in keeping with the desires of the peoples.

The Teheran (November 28-December 1, 1943), Yalta and Potsdam Conferences of the heads of state and government of the three great powers of the Anti-Hitler Coalition were of great international importance. They were further manifestations of Lenin's wise concept of peaceful coexistence, which has been the cornerstone of Soviet foreign policy since the birth of the Soviet state.

As far as the Soviet Union was concerned co-operation with the Western powers logically flowed from its fundamental propositions of foreign policy. In contrast to this, the other members of the Anti-Hitler Coalition, above all the USA, had to depart to a certain degree from established anti-Soviet ideas.

From October 1917 the policy of the US ruling circles was an anti-Soviet policy. Its purpose was to weaken and destroy the world's first socialist state. This policy was accompanied by slanderous propaganda campaigns about a "communist threat," "Soviet aggressive plans" and the like. Such a policy proceeded from the concept that brute force was the only effective means to deal with the USSR.

Elements of a new American approach towards the USSR first manifested themselves after Franklin D. Roosevelt was elected President of the USA in 1932 and subsequent official recognition of the Soviet Union in November 1933. Franklin D. Roosevelt realised that the USSR was a mighty power. Without its participation no cardinal international problems could be solved. That was why he favoured the establishment of Soviet-American cooperation.

The whole history of the Anti-Hitler Coalition showed that only joint efforts of the Big Three could ensure the solution of cardinal questions in the struggle against the aggressors and lay the foundation for postwar peace and a system of international security. It is worth noting that the parties to the Yalta Conference laid special emphasis on the decisive role of three-power unity both in pursuing the war and in organising the peace. The joint statement of the three heads of government on the results of the conference devoted a

special section to the idea of unity. It expressed their resolve to preserve and strengthen in the forthcoming period of peace the unity of aims and action which made possible and undoubtable victory in the present war. Only continued and growing cooperation and understanding between the three countries and between all peace-loving peoples, the statement pointed out, would help realise mankind's supreme desire — a firm and lasting peace.

Addressing US Congress on the results of the Yalta Conference President Roosevelt underscored that a big step forward had been made along the road to international peace, and expressed his hope that the conference in the Crimea would mark a turning point in the history of the USA and, hence, in the history of the world.

However, these hopes were not destined to be realised. After Franklin D. Roosevelt's death in April 1945 there was a sharp turn towards rabid anti-Soviet policy. With Winston Churchill as their mouthpiece the West proclaimed and then unfolded the cold war. They began to prepare for aggression against the USSR and other socialist countries. As early as 1949 the Joint Chiefs of Staff of the USA produced a plan for war against the USSR under the code name of *Dropshot*. This plan provided for dropping atom bombs on the USSR's big cities and industrial centres, and subsequent occupation of its territory.

The US ruling circles again began to deal with the USSR from a "position of strength." This policy manifested itself in various aggressive military-political doctrines, such as the doctrine of "containment," "massive retaliation," and "flexible response." Actually these doctrines reflected the desire of the US ruling circles to achieve world domination. They again circulated the myth of a "Soviet threat."

Late in the 1970s an important government document setting forth America's military-political strategy was published in the USA. Document NSC-68 was adopted by the National Security Council in 1950. It embodied the views and ideas of the most aggressive US circles. It des-

cribed the USSR as the USA's total enemy. It stated that confrontation with the USSR was inevitable until changes occurred in the character of the Soviet system. The document proposed to carry out an intensive re-armament programme to enable the USA to exert pressure on the Soviet Union from a position of strength. It provided also for other methods of exerting pressure on the USSR and other countries of the socialist community, including psychological warfare, a trade blockade, and "economic attrition."

Though imperialism resorted to these methods in the 1940s, 50s and 60s, it failed to achieve the results it desired. The USSR and the other countries of the socialist community made impressive achievements in economic and cultural progress and in building up their defence capacity. The USSR persistently conducted a peaceful foreign policy, which enjoyed the support of all progressive mankind. The colonial system of imperialism collapsed. The peoples stepped up their fight for social emancipation. The balance of world forces underwent a radical change in favour of socialism. The defeat of the US aggression in Vietnam clearly testified that the imperialist line of using military force to settle international problems was absolutely hopeless.

In this context a new tendency began to manifest itself in US foreign policy in the early 1970s, the tendency to settle disputes with the USSR through talks. That this line was feasible had been proved by the practical work of the Anti-Hitler Coalition in the Second World War.

Thanks to the efforts of the Soviet Union, the socialist countries and other progressive forces a definite relaxation of international tensions has set in. However, certain forces are actively fanning the hackneyed myth of a "Soviet military threat" and "Soviet hegemonism." These forces are trying to bring back the days of the cold war. They oppose all concrete measures designed to promote détente. To guarantee peace and security of peoples it is necessary to fight against these forces and to expose their plans and intrigues.

REFERENCE: "Soviet Military Review", No 1, 1980

ORIGIN: 1417

PERCEPTIONS, VIEWS, COMMENTS

HELICOPTER RECONNAISSANCE

Moscow SOVIET MILITARY REVIEW in English No 2, Feb 80 pp 29-31

[Article by Maj Gen M. Belov, D. Sc. (Military): "Helicopter Reconnaissance"]

[Text]

The saturation of units and formations of the and forces with modern armament and equipment systems has drastically enhanced their combat capabilities, the spatial scope and dynamics of an all-arms battle. This, in turn, has led to an increase in the volume of information on the enemy and terrain indispensable for an all-arms commander to take a substantiated decision and to exercise firm and flexible control over troops and materiel.

Proceeding from this, an increasing role in fulfilling reconnaissance missions is assigned to helicopters. To obtain data essential for an all-arms commander, foreign armies widely use specially designed light-weight small-size helicopters, highly manoeuvrable both in the air and on land, equipped with various armament systems. Analysis of the experience of local wars and exercises has shown that such rotary-wing machines can be based on tiny and unorganized patches of land immediately behind the battle formations of first- and second-echelon units. Helicopters make effective use of accidents of the terrain for a covered approach to the objective, i.e. unnoticed, allow a thorough inspection of designated areas, detection of small targets and successful fulfillment of reconnaissance missions by the method of drawing fire on oneself.

Taking this into account, units and formations in foreign armies continue to build up the number of light reconnaissance helicopters. Research is being carried out to develop machines possessing still higher manoeuvrability and survivability, capable of fulfilling combat missions in complicated weather conditions both by day and by night, quickly transmitting exact data on the enemy, landing reconnaissance and sabotage parties and subsequently evacuating them.

It is intended to provide new helicopters with highly sensitive reconnaissance instruments, infrared lateral and front view stations, computers and efficient radio facilities for detecting a target and warning of its approach. To extend the depth of air reconnaissance, new helicopters are envisaged carrying a side-looking radar. Work is also being carried out to develop single-seat collapsible helicopters for use as "light air scouts." One version of such flying machine is said to weigh 118 kg (maximum take-off weight is 250 kg), and to have a range of nearly 400 km and a cruising speed of about 140 km/h. A few dozen armed scouts, each provided with such a machine, can be airlifted to a designated area by a troop-carrying helicopter and return to base independently after fulfilling their missions.

At the present time the most typical combat reconnaissance missions carried out with the use of helicopters are: obtaining information on the

enemy, marking targets, etc.

enemy manpower and materiel used in different kinds of fighting, including nuclear weapons, the air defences of formations, artillery, control posts; disclosing the enemy grouping, ascertaining the layout and engineering organisation of defence lines and zones, the location and activities of the reserves, particularly armoured subunits and units; examining the condition of ground communications and the nature of the terrain in the directions of the friendly and enemy actions; revealing contamination areas and zones, road blocks and flooded areas; carrying out target designation and fire adjustment.

During an offensive helicopter reconnaissance is effected primarily in the interests of subunits acting in the direction of the main blow, its purpose being to obtain the information necessary for the commander to take a timely decision in order to secure the required rate of advance and to fulfil the combat mission in the assigned time.

During the breakthrough of enemy defences reconnaissance helicopters establish the direction of the advance, likely deployment lines and directions of counterattacks by the enemy reserve, favourable directions of advance and lines for committing friendly second echelons and reserves to action. In the event of an airborne landing, reconnaissance helicopters collect data on the conditions of helicopter flight and landing on the designated grounds, on the enemy AA defences along the flight routes and in the landing area, on the location and nature of antilanding obstacles, and the location and nature of combat actions of subunits detailed to fight invasion forces.

In crossing water barriers, reconnaissance helicopters obtain information on the nature of the river, its depth, speed of the current and type of bed and banks. They also select favourable approaches to crossing areas, establish departure lines and zones, composition of enemy groupings, nature of actions and presence of defensive installations on the near and far banks. When advance parties are sent out, helicopters select the most favourable routes of movement, detect obstacles on the route, establish the degree of passability of broken-country sectors, availability, location and condition of bridges and other important tactical installations and engineer constructions. Simultaneously with route reconnaissance, helicopters reconnoitre the enemy before the front line and on the flanks, disclose obstacles and routes for bypassing them, and also enemy-free sectors of the terrain.

In anticipation of a meeting engagement, and when pursuing the enemy or withdrawing, reconnaissance is assigned the following missions: to

disclose quickly the concept of the enemy's actions, choose the most rational direction of the main effort, favourable deployment lines for march security elements and for the main forces, artillery fire positions and location of control posts. In fulfilling these missions, helicopters carry out efficient reconnaissance of the enemy on the flanks and in the gaps between units acting in different directions and isolated from the main forces, and also before their front line and in the rear.

Being capable of examining vast areas in a short time, helicopters quickly disclose various obstacles, e.g. road blocks, antitank ditches and dragon teeth, and even mine fields if provided with the necessary equipment.

In defence, helicopter reconnaissance is carried out for uninterrupted observation of the enemy's actions and to disclose changes in the composition of his manpower and equipment. When the enemy units begin advancing for the attack, reconnaissance helicopters are used to disclose positions and lines on which enemy nuclear and conventional weapons and first-echelon subunits are deployed, and to designate targets to friendly fire weapons, including combat helicopters. Much attention is given to determining the take-off time, flight routes, composition and landing areas of enemy landing forces and the actions of his combat helicopters.

The methods of helicopter reconnaissance are being constantly improved. They depend on the equipment carried, the nature of missions and conditions of their fulfilment. Visual observation, photography, reconnaissance in force with dropping of specially-trained groups and the like, are finding particularly wide application.

To conduct observation from friendly territory, helicopters are expected to climb to a considerable altitudes. An altitude of 1,000-1,500 m in good visibility conditions is said to allow antitank ditches, trenches and personnel trenches to be thoroughly examined at a distance of 6-8 km, and firing artillery batteries, and motorised infantry and tank columns at 15-20 km.

In the vicinity of the forward edge or above enemy-occupied areas, observation from low altitudes is preferable, as a rule. It is effected by the helicopter crew or the all-arms commander. It is assumed that in the latter case the commander has the possibility to estimate the situation quickly, in particular to evaluate the losses sustained by the belligerents and other results of the battle, and to issue relevant orders after specifying the mission.

Helicopters sent out towards the flanks in the gaps between battle formations operate in pairs. They can move by "leaps" from one shelter to another, covering each other as they do so. Observation data are either transmitted immediately or reported personally after landing.

When a mission is performed by a pair of reconnaissance helicopters, one of them is the leader and the other the trailer. The former effects active reconnaissance and the latter covers the leader's actions, following him at a distance of 100-150 m to be able to watch the situation in the zone of the leader's actions and at the same time to avoid heavy fire from the ground at the first helicopter. If necessary, helicopters hover over the target, determine its position and call out combat helicopters or airplanes to attack it.

Reconnaissance helicopters photograph objectives by taking mainly oblique pictures. The objectives photographed may include defensive positions, engineer obstacles, and also likely crossing areas and routes of movement. The depth of oblique aerial photography from an altitude of 2,000 m may reach 10 km and even more.

Experiments have confirmed the efficiency of electronic helicopter reconnaissance. Modernised radio aids and methods of using them are being constantly developed. These are aimed at ensuring reliability of navigation, timely detection of ground and air targets and warning of any air enemy. TV cameras installed on helicopters transmit stable images to control post TVs over 50 km away.

Foreign armies practise helicopter reconnaissance in force by the method of drawing fire on oneself. This method is of particular importance in preparing for and carrying out airlifting operations. Reconnaissance helicopters are assigned the mission of disclosing in time any enemy groupings on the flight route and in the combat area, determining the location of AA weapons and probable bypass routes, finding out the degree to which they are put out of action by artillery and air strikes, specifying accidents of the terrain and vegetation on the flight route and in the combat area.

In such cases the reconnaissance is generally carried out by two reconnaissance and two combat helicopters. The former hedgehop to draw fire on themselves, the latter fly 10-12 m above and behind them and attack the targets detected.

Landing of reconnaissance parties is envisaged in all kinds of combat operations. These parties can inspect the terrain from the air with the helicopters flying at a low altitude and speed, or when dismounted after landing. The flight, landing and examining of an area are covered by combat helicopters. If necessary, reconnaissance parties can be supported by artillery and tactical aviation. If combat operations other than airlifting are executed, the principal mission of such parties, called long-range reconnaissance patrols abroad, is detecting the enemy and not fighting a battle. Therefore, provision is made for them to be able to observe the designated area for several days.

Much importance is attached to using helicopters for night reconnaissance. To this end, special equipment is being developed and crews and special groups trained.

For reconnaissance purposes, in most punitive operations the American interventionists used combat helicopters jointly with army aviation combat aircraft. One plane would fly at an altitude of 500 m searching for the target with the use of infrared devices, while another, flying 500 m behind, would illuminate the detected targets with flares. At the same time, two combat helicopters flew at the same distance at low altitude and fired at the targets.

US air mobile divisions which took part in the aggression in Indochina also formed special groups for night reconnaissance operations. Each group comprised two helicopters provided with night vision devices and searchlights.

Thus, practice has confirmed the high efficiency and significance of helicopters as a means of solving diverse reconnaissance tasks in an all-arms battle.

Used in combination with other flying vehicles and ground reconnaissance, they are believed to be capable of providing an all-arms commander quickly with fairly authentic information indispensable for taking timely and well-grounded decisions in a fluid situation over a vast area.

PERCEPTIONS, VIEWS, COMMENTS

COMMENTS ON FOREIGN COMBAT DIVERS

Moscow SOVIET MILITARY REVIEW in English No 1, Jan 81 pp 27-28

[Article by Capt 1st Rank A. Nikolayev: "Military Divers"]

[Text]

In the morning of December 19, 1941, the British Mediterranean Fleet suffered a devastating blow and thus lost its supremacy at sea for a long time.

The blow was struck by six Italian underwater saboteurs. They were delivered by submarine to the entrance of the Alexandria harbour and from there they rode astride special guided torpedoes. After approaching the ships the saboteurs attached 300-kg high-explosive bombs to their hulls and switched on the fuse clockwork.

The first pillar of water rose suddenly near the battleship "Valiant." The thunder of the explosion rolled over the quiet morning harbour. A few minutes later a similar pillar of water rose by the side of the battleship "Queen Elizabeth." Soon a powerful explosion sounded near a big tanker. All around was enveloped in flames and smoke as the oil burnt on the surface of the water. Both ships sank in shallow water. It took several months to raise and repair them.

All the saboteurs were captured, but they had managed to do their job.

Following the Italians' example the British, American, German and Japanese navies began to use underwater saboteurs. However, military operations showed that torpedo-mounted divers (not to men-

tion frogmen) moved at a low speed, their range was small and they were highly vulnerable. In this connection some countries began to develop midget submarines.

On September 22, 1943, two such submarines penetrated a well-guarded Norwegian fjord and the crews set four charges (weighing a total of 8 tons) under the hull of the German battleship "Tirpitz." Seriously damaged by the explosion the ship could not be put in operation till April 1944.

On July 31, 1945, two midget submarines destroyed the Japanese cruiser "Takao" lying in the Singapore harbour.

The US used underwater saboteurs extensively during operations in the Pacific. They took part in the landing operations on the Marshall and Mariana islands. The role played by combat divers was especially important in the landings on the islands of Eniwetok, Saipan and Guam. On the approaches to Guam alone divers blew up more than 600 landing obstructions. Frogmen contributed considerably to the successful landing on Tinian Island and on the southeastern coast of Borneo (Kaliantan). Here, near Balikpapan the American military divers made two lanes (almost 2 km wide each) through landing obstructions.

British and American military divers were set an important mission during preparation for the landing in Normandy. Several weeks before the "Overlord" operation began, 7000 divers thoroughly reconnoitred

Based on foreign press reports

the sea coast to detect the landing obstruction system used by the Nazis and also to draw up depth and current charts. On June 6, 1944, the day of the landing, underwater saboteurs destroyed hundreds of landing obstructions (steel nets, concrete blocks, etc.), defused and destroyed thousands of antilanding mines. By the end of the day, in one sector they had made 13 lanes 100-150 m wide and marked them with buoys.

After the end of the Second World War the Americans used military divers during their intervention in Korea (1950-53). Before the Inchon landing operation (September 1950) up to a hundred underwater saboteurs examined the sea bed, determined the water depth in the landing areas and designated shallows and free channels with buoys. Before the American landing in Wonsan military divers reconnoitred the sea bed in the port to remove bottom and anchored mines and destroyed bridges and tunnels.

Underwater sabotage teams were used by the Americans from the very beginning of their aggression against the Democratic Republic of Vietnam. They reconnoitred the approaches to ports and landing sites, destroying mines at the anchorages of the Seventh Fleet. Then they examined the coastal areas occupied by the national liberation forces and carried out sabotage there.

In the training of sabotage groups the emphasis was on blowing up various installations, underwater swimming, parachuting and no less killing. In Vietnam military divers operated in small parties (5-10 men). They were taken to the enemy rear by speed launches or boats with outboard motors. To avoid detection they swam ashore underwater.

Israeli underwater divers conducted several operations with American equipment in 1978-79 on Lebanon territory. After disembarking or arrived from launches they blew

up several small fishing vessels under the pretext that they were used to deliver weapons to the Palestine Liberation Organisation, blew up a number of installations and committed political assassinations.

At present many foreign navies include diver units. According to the foreign press in the mid-70s the US navy had five underwater sabotage teams, each composed of five platoons and totalling 16 officers and 100 petty officers and seamen.

In peacetime small frogman sub-units operate as part of the US Sixth and Seventh fleets in the Mediterranean and in the Western Pacific. In wartime frogmen usually operate in small groups (2-6 men) jointly with similar army and air force groups.

For underwater operations divers are provided with different types of shallow-water equipment. Depending on the mission, this may include a breathing apparatus, a diving suit, a mask, fins, survival gear, a depth gauge, a diving compass, a waterproof watch, a flashlight and also sonar equipment, audio and ultra-short-wave communication facilities, underwater weapons and a demolition set.

The US navy uses automatic breathing apparatuses with closed, open and semi-closed cycles. In a closed-cycle apparatus the expired air goes first through the absorber to be freed of carbon dioxide and is then enriched with oxygen to be used again for breathing. With this apparatus, a diver can stay under water unobserved for a relatively long time. An open-cycle apparatus operates on compressed air (equalung) and an apparatus with a semi-closed cycle uses a mixture of oxygen and nitrogen.

Wet suits and rainsuits (with electrical heating from storage batteries when used in cold waters) preserve the warmth of the wearer's body and partially protect him from underwater explosion shocks.

Survival gear is an indispensable component of a combat diver's equipment. It is made of a rubberised cloth and resembles a life jacket enabling the victim (wounded or unconscious) to emerge to the surface automatically observing decompression stops.

Military divers are armed with underwater rocket weapons, pneumatic pistols firing spikes to a distance of 10 m under water and 250 m in the air and with flat knives. Their demolition sets include special limpet mines and charges weighing from 3 kg to 300 kg. Clockwork fuses are also extensively used. Fitted with antistrike devices, charges are usually secured to the protruding parts of a ship with screw clamps and small charges with holding magnets or special suction devices.

As far back as the 60s-70s the US developed portable sonar equipment for underwater saboteurs to detect mines, landing obstructions and so on. Provision was also made for light and compact audio communication stations with an operational range of 500 m.

Combat divers are delivered to their destination by midget subme-

rines to short distances or military underwater transport from which they surface through torpedo tubes or special chambers. Their delivery to and evacuation from the place of operation can be effected either by multiplace underwater craft or by single-place towboats.

The American "Newsweek" magazine wrote that late in 1978 British designers had developed a one-man submersible vehicle provided with four screws. It was designed to submerge to a depth of 600 m and stay under water for 36 hours.

According to foreign military specialists well organised observation is effective against military divers and their underwater vehicles. Among active countermeasures they include depth charges, explosive charges and mines which can be delivered by various craft, mainly speed launches. An important antisabotage step is inspection of ships' hulls and anchor chains, which makes it possible to detect and render harmless any limpet mines attached to them.

The attention of some foreign navies to the use of underwater saboteurs shows that they assign them an important role in aggression plans.

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PERCEPTIONS, VIEWS, COMMENTS

VIEWS ON PRC, OTHER DEVELOPING COUNTRIES

Moscow SOVIET MILITARY REVIEW in English No 1, Jan 81 pp 47-49

[Article, published under the heading "International Affairs," by V. Krivtsov, D. Sc. (History), Professor: "Peking and the Developing Countries"]

[Text]

After the Second World War there appeared a large group of countries which received the name "developing." Most of them are situated in three basic regions — the Asian (32 states), African (51 states) and Latin American (30 states), the countries of each region having their peculiarities and specifics.

At present, the problem of the developing countries in the world arena has become one of the most important and acute. This is due to the fact that they comprise the majority of the modern world's sovereign states (over 110 out of 160); their total population exceeds the 2 billion mark, or 50 per cent of the entire world population; they account for almost 60 per cent of the earth's land mass and possess vast reserves of minerals and other scarce raw materials; in the world export of mineral and agricultural raw materials the developing countries account for 30 per cent in 24 types and for 80 per cent in 12 types.

Yet the majority of developing countries are experiencing political, economic and social difficulties owing to the backwardness of the means of production, the agrarian, often monocultural economy, poverty, lack of capital and unemployment.

As to the relations of socialism and capitalism to the developing countries, these stands are diametrically opposed. Capitalism has historically been the enslaver, oppressor and exploiter of these countries; it bears most of the responsibility for their backwardness and the difficulties

they are experiencing. On the other hand, the basic interests and goals of the socialist and the developing countries in the world arena are identical or very similar to one another. We are referring to the struggle for peace, détente, just economic international relations, democracy and social progress.

What is the policy of the People's Republic of China vis-à-vis the developing countries?

The main thrust in the PRC's policy toward the developing countries is to win them over to its side, to use them in the interests of its strategy and tactics and to include them in a global struggle in the world arena against the Soviet Union and the socialist community countries, for world domination.

There are grounds for supposing that the Chinese leadership staked on creating a system of states orientated in their development on the Maoist political and ideological model first in Southeast Asia. The Chinese leadership began taking practical measures aimed at realising this regional strategic design back in the early 50s, in a bid to place the national-liberation movements under its control by imposing the Chinese model of the revolutionary process on them. However, the Chinese leadership particularly stepped up its activity here in the first half of the 60s. Peking declared Southeast Asia a "hotbed of revolutionary storms" of the modern world, the centre of "all world contradictions."

The Maoist foreign policy strategy as regards

the developing countries at this time was mirrored in the theory of struggle of the "world village" (Asian, African and Latin American states) against the "world town" (North America and Europe, including the Soviet Union) via the unleashing of "people's wars." What is being referred to is the Chinese leadership's attempt to realise its regional designs in Asia, where it planned a whole series of political actions, which, when carried out, were supposed to give China control over first Indonesia and then the other states of the subcontinent, and finally India. The Chinese leadership acted most vigorously in such countries as Malaysia, the Philippines, Indonesia, Burma and Thailand. Peking tried to unleash "people's wars" in many of these countries, and crudely interfered in the internal affairs of Nepal, India, Ceylon, Laos and other states.

Despite Peking's tremendous efforts, however, this policy did not bring positive results.

Its failure dealt a blow to the Maoists' plans in Asia. This did not, however, force the Chinese leadership to abandon its strategic aims in Asia, it merely compelled them to make certain changes in them.

The seventies marked a new stage in the PRC's foreign policy, one of open rapprochement with imperialism and other reactionary forces in the world arena. Its policy toward the developing countries began to be reshaped as well. Peking's policy exhibited a growing tendency toward forming blocs with the most conservative, reactionary regimes in the developing countries, such as the governments of Pinochet, Sadat and others. On the other hand, Maoist barracks-socialism was fully discredited in the 70s, which forced the Chinese leadership temporarily to refrain from propagandising the Chinese "model" of socio-economic development in Asia, Africa and Latin America.

It should be pointed out that Chinese interest in the developing countries in the mid-70s grew also in view of the fact that the latter began actively to demand that international economic relations be restructured and pressure brought to bear on the developed capitalist countries by raising prices on minerals and other commodities. Peking drew the conclusion from this that the developing countries can exert a strong influence on the present-day economic and political order in the world, deprive the developed countries of "resources" if need be and thus have an extreme impact on the current world situation. In other words, the developing countries can change the

economic weight of the developed countries in today's world, which, given China's huge manpower and natural resources would ensure its role as leader on the world stage.

During the 70s substantial modifications were made in China's strategy with regard to the countries of Asia, Africa and Latin America. Intermediate strategic objectives were drawn up. This was done with due consideration of the present state and perspectives of the PRC's relations with the US and the developed capitalist countries of Europe, and Japan. In this respect the PRC's intermediate strategy vis-a-vis the developing countries objectively serves the strategy and interests of imperialism.

As to the intermediate goals of Peking's foreign policy toward the developing countries at the present time, the most important of them boil down to the following: to turn China into the leader of the developing countries; to undermine friendship and cooperation with the USSR and the entire socialist community; to unite the developing countries in some "antihegemonic alliance" headed by China and to dovetail this alliance with anti-Soviet alliances in the developed capitalist countries; to support the political and military blocs of the imperialist countries of which several developing countries are members; to undermine the movement of the developing countries to safeguard peace and for détente and security; to drag the developing countries to the arms race and intensify their dependence on the PRC.

The aforementioned intermediate strategic goals of Peking as regards the developing countries attest to the fact that they partially or fully coincide with the objectives of the present-day neocolonialist strategy of imperialism. Nor should it be forgotten that several of them were posed jointly by Peking and Washington strategists (such as the struggle against the USSR and the other socialist countries under the guise of the fight against hegemonism).

In an effort to facilitate the entrenchment of its dominant influence in the developing countries, Peking is broadcasting its readiness to "establish and develop relations with all countries on the basis of the five principles of peaceful coexistence." In reality, however, such statements are a tactical device aimed at calming the developing countries and reaching compromises and agreements with reactionary and nationalist regimes and circles. Such agreements are often

concluded secretly, as they are usually directed against revolutionary processes and social progress. Mention should be made in this regard, for example, of the agreement between Peking and Cairo on military and political cooperation in Africa against "Soviet-Cuban penetration." The PRC and Pakistan are also suspected of having reached an accord on joint struggle against the revolutionary processes in Afghanistan and other Southeast Asian countries.

The Chinese leadership continues to use the insurgent movements it has inspired in Malaysia, Burma, Thailand and the Philippines, as well as pro-Maoist groupings in India, Nepal, Bangladesh and other countries as a vehicle for exerting pressure on a number of Southeast and South Asian countries. With the aid of these forces Peking is gearing the domestic policies of these states towards struggle against social progress and their foreign policies — toward support of the PRC's foreign policy course. A major role is played by Chinese emigres, who often hold key positions in the economies of these countries.

Propaganda still figures prominently among the means with which Chinese diplomacy attempts to influence the developing countries. It is aimed, on the one hand, at the inculcation of Chinese concepts and, on the other, at the discrediting of scientific socialism and the Soviet Union.

Although the slogans of struggle against imperialism, socialism, racism and zionism continue to have their place in Chinese propaganda, Peking's practical activity convincingly attests to the fact that the policy of the Chinese leaders, their approach to the vital problems of the developing countries are deeply at variance with the fundamental interests of the peoples' struggle for national independence and social progress.

The PRC relegates an important role to economic relations with the developing countries. Trade with them began to rise rapidly in the early 70s, the PRC's exports growing approximately twice as fast as its imports. China is cutting back on economic aid, however. The eighties will witness the heightening of the importance of the economic factor in the PRC's relations with the developing countries.

This is due, first of all, to the fact that the Chinese leadership has posited the task of turning the PRC into a militarily powerful state by the year 2000. This is impossible without importing plants, equipment, machinery and know-how.

Trade with the developing countries is acquiring exceptional significance for the PRC, as it provides it with an opportunity to cover a large portion of its deficit from trade with the developed capitalist states and to obtain a number of raw material commodities from the market of the developing countries, such as rubber, cotton, copper and phosphates.

Despite the fact that real possibilities for economic pressure on the developing countries by the PRC are somewhat limited due to its own economic backwardness, they should not be underestimated. The developing countries are being drawn more and more vigorously into the arms race. One of the primary reasons for this process is the neocolonialist policy of imperialism, which hopes to consolidate its influence in the developing countries and weaken their unity, as well as to draw more and more profits from the arms trade. Not only did China support this imperialist policy in the 70s, it also took an active part in it. In the 80s and 90s China can be expected to try to intensify militarisation, and escalate the arms race in a number of developing countries which it apparently hopes to eventually convert into a market for its growing arms industry.

The PRC's rapprochement with the developed capitalist countries and its concentration on the "four modernisations" programme are creating a number of new problems in Peking's relations with the developing countries. It is becoming increasingly clear that rapprochement between the PRC and the developed capitalist countries is proceeding to a considerable degree at the expense of the interests of the developing countries, which means that the PRC is sacrificing the interests of these countries for its own development. This, of course, cannot but influence the latter's relations with Peking. As is known, the economic and political contradictions between imperialism and the developing countries are increasingly exacerbating.

Peking, however, is smoothing over their contradictions to the detriment of the developing countries.

In conclusion, a few words about the perspectives of the PRC's strategy in relation to the developing countries. In the global long term this course does not and cannot promise the results

Peking is staking on. The Chinese leaders will not be able to draw the developing countries into an active struggle against the Soviet Union and the other socialist countries; they will be even less successful in forming an anti-Soviet front in the world arena. Nor will Peking be able to realise its plans on a regional basis, insofar as the foreign policy course of the PRC and its strategy and tactics vis-a-vis Asia, Africa and Latin America pursue chauvinistic, hegemonic goals and run counter to the fundamental interests of the developing countries.

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PERCEPTIONS, VIEWS, COMMENTS

COMMENT ON INTERNAL SITUATION IN ETHIOPIA

MOSCOW SOVIET MILITARY REVIEW in English No 1, Jan 81 pp 30-51

[Article, published under the heading "International Affairs," by E. Babazade: "Ethiopia: The Revolution on the March"]

[Text] In February 1974 an anti-monarch, anti-feudal revolution began in Ethiopia, opening a new chapter in the history of this ancient African country.

THIS revolution was headed by a movement of the armed forces. The fact of the matter is that there was no political organisation in monarchist Ethiopia with a precise programme of revolutionary actions. The only organised force capable of taking charge of the movement to overthrow the feudal-monarchist rule was the army, more precisely, its non-commissioned personnel and junior officers.

It was precisely from these circles that the Coordination Committee of the Armed Forces (CCAF) was formed, incorporating representatives of the standing army, police and territorial troops. Mengistu Haille Mariam, a 33-year-old major of the 3rd army division, was elected Committee chairman. In this fashion, it was in the person of the CCAF that the country's revolutionary forces acquired for the first time an organised, truly powerful vanguard.

After the dethronement of Emperor Haile Selassie on September 12, 1974 all power went to the CCAF, which was soon afterward renamed the Provisional Military Administrative Council (PMAC), which proclaimed a programme calling for a fundamental break with the traditional political and economic institutions, and the implementation of socio-economic transformations for the benefit of the Ethiopian working people.

In the course of the transformations the revolutionary leadership headed by Mengistu Haille Mariam encountered a multitude of problems: opposition from the monarchists, separatist movements, opposition underground organisations and an attack by the neighbouring state of Somalia.

The Ethiopian revolution is now going through a period of consolidation. Numerous measures have been taken which have inaugurated socio-economic change in Ethiopia. In December 1974 PMAC publicised a programme of socialist

orientation, in accordance with which a number of radical reforms were enacted in just a few months. The nationalisation of the banks, insurance companies and industrial enterprises, and agrarian reform—all this took away the power of those possessing the means of oppression and opened up broad vistas for the construction of a society of social justice.

A law was passed guaranteeing the right to work and an eight-hour work day. Workers are provided medical care and an annual paid vacation. Women are given maternity leave and their jobs are kept for them. For the first time children of industrial workers and low-paid office personnel have begun to go to kindergartens. Whereas from 1930 to 1974 32 children's preschool institutions were built in the country, predominantly in the capital, 36 more have appeared during the five years since the revolution alone. For the first time a special preschool educational department has been formed within the Ministry of Education which has organised special courses for the training of kindergarten teachers. Apartment houses for industrial workers and government personnel have gone up in Addis Ababa, Asmara and other cities and towns. In Addis Ababa alone plots of land for the building of homes have been allotted to 20,000 families, and the housing construction bank has provided loans to thousands of families for this purpose. The first kindergarten has appeared in the city of Gondar, 65 homes for the poor have been built here as well. The new labour legislation, measures to improve health care and eliminate illiteracy, the construction of new housing estates and the simultaneous lowering of rent for low-income families, the organisation of cooperative shops with stable prices within

everyone's reach — all of this has gone to raise workers' living standards.

The most important of the socio-economic transformations in this country with its predominantly agrarian structure (in 1973-74 only some 60,000 persons were employed in industry) is undoubtedly the extensive agrarian reform. It was inaugurated by the decree on the nationalisation of land of March 4, 1975. This document so historic for Ethiopia declared all land the property of the state. Each peasant family received for its own use a strictly limited allotment of up to 10 hectares. The actual size of the plots within this framework was made dependent upon a number of objective factors, such as soil quality and the population density in a given area. The revolutionary legislative body further determined that the peasant farm should be viewed as a family farm, that is, it may not use outside labour. Renting out land or any other form of alienating the land and transferring it to a third party were outlawed as well.

Not only did the land reform in Ethiopia lead to the complete elimination of large-scale private tillage, it also created the preconditions enabling the peasants to provide for themselves and the country to amass the means for its industrialisation.

On the initiative of the peasantry some 28,000 local peasant associations were formed in the country, presently uniting upwards of 7 million peasant families. Originally created solely as local organisations of mutual assistance among the peasantry, these associations soon afterwards received the juridical status of democratic bodies of self-rule invested with wide powers in all spheres of political and social life in rural communities. The local peasant associations simultaneously serve as the primary organisations of the Ethiopian Peasants' Association (EPA), formed in late April, 1978. It is this country's largest public organisation.

The beginning of 1979 witnessed a "nationwide revolutionary development campaign" in Ethiopia, during which concrete short- and long-term objectives were posed. In a speech to farm workers, Mengistu Haile Mariam, head of state and government, affirmed that the major role at the present stage of the country's development belongs to agriculture, and called upon them to ensure a considerable part of the provision of the population with foodstuffs, and of factories with raw materials.

This appeal met with wide approval on the part of the peasant masses. At the Second EPA Congress in May 1979 peasant delegates from all of the country's 14 provinces declared their support for the course proclaimed by the PMAC for national democratic development with a socialist orientation. They also endorsed the course for the cooperation of agricultural production.

As Ethiopian Peasants' Association Chairman Abdulla Sonessa stated, model cooperative farms are being set in all

provinces; individual peasants must see for themselves the advantages of cooperative labour. The state helps cooperatives by providing bank loans on easy terms and privileges in the distribution of fertilisers and seeds, and by supplying them with agricultural technology.

An active part in the implementation of PMAC socio-economic measures is played by the army and militia, which were created during the years of the revolution on the basis of the progressive nucleus of active servicemen and office workers. The armed forces and militia became an important revolutionary force. The Programme of the National Democratic Revolution adopted in April 1976 states: "The role of the armed forces of Ethiopia and militia consists in protecting the country's territorial integrity and unity and peace. They will be educated in the spirit of socialism to execute these tasks and safeguard the well-being and security of the popular masses of Ethiopia. The necessary measures will be taken for them to work hand in hand with the masses in peacetime in production and in developing individual regions."

Today the civilian population does not harbour hatred for servicemen, as it did just 7 or 8 years ago; today's army is the people's army. Repeating the words of Vladimir Lenin, Chairman of PMAC and the Commission for the Organisation of the Workers' Party of Ethiopia Mengistu Haile Mariam said: "Today one does not have to be afraid of the men with the rifle, because he is defending the working people..."

During the offensive by the forces of internal reaction and aggression of Somalia in 1977-78, Ethiopia's standing army, jointly with detachments of the national guard managed to uphold the sovereignty of the country and safeguard the gains of the 1974 revolution. Alongside its basic function of protecting the country, the Ethiopian army has since the first days of the revolution been taking an active part in peaceful construction, rebuilding bridges, roads and electric power stations destroyed by the war and by saboteurs, erecting new schools and hospitals, and participating in the nationwide campaign to eliminate illiteracy among the adult population.

The events have shown that the main reason for the internal consolidation of the Ethiopian Revolution is the constantly growing moral and political unity of Ethiopian society and the active participation of the peasants, trade unions and women's and other public organisations, as well as the militia and army in tackling nationwide tasks. They are guided in their activity by the Programme of the National Democratic Revolution adopted by the PMAC, which envisages the formation of a united vanguard of the Ethiopian Revolution — a workers' party.

A major step in the direction of creating such a party was the First Congress of the Commission for the Organisation of the Workers' Party of Ethiopia (COWPE), which was held in Addis Ababa in June 1980. The country's fur-

ther development and the creation of a party of the working class were discussed at the congress. The election of Mengistu Haile Mariam to the post of COWPE chairman expressed itself in the unanimous endorsement by the congress' delegates of the Programme of the National Democratic Revolution and the PMAC's entire course. At the congress' decision the newspaper "Serto Ader" (The Worker), COWPE's official mouthpiece, began to be printed in the country.

The struggle of the Ethiopian people to lay the foundations of a socialist society is proceeding in difficult conditions. The forces of internationalist imperialism are once again weaving a plot against this country. The Ethiopian government has come forward with new proposals for a peaceful settlement of the border problem. It is precisely this policy, the policy of establishing good-neighbourly relations with the other countries of the region that has won Ethiopia the respect of peace-loving and progressive forces and increased prestige in the world arena.

Relations between the Soviet Union and Socialist Ethiopia are developing on the basis of the Treaty of Friendship and Cooperation signed in Moscow in November 1978. "The Soviet Union, being true to the Leninist principles of proletarian internationalism," the Soviet leaders stated in a telegram sent to Mengistu Haile Mariam on the sixth anniversary of the national democratic revolution, "has been and remains a trustworthy friend of Socialist Ethiopia, one ready to render it aid and support."

The official visit of Mengistu Haile Mariam, Chairman of the Provisional Military Administrative Council of Socialist Ethiopia and Chairman of the Commission for the Organisation of the Workers' Party of Ethiopia to the USSR at the end of last October was a new landmark in the development of friendship between the Soviet and Ethiopian peoples. During the talks which took place in Moscow L. I. Brezhnev, General Secretary of the CPSU Central Committee, Chairman of the Presidium of the USSR Supreme Soviet, gave assurances that the Soviet Union would continue to help the Ethiopian people to build up their national economy, to train native specialists for the national economy, to develop science and culture and to organise the public health services.

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